2003

The effect of self-evaluation maintenance on friendship choices and cohesion in sport

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THE EFFECT OF SELF-EVALUATION MAINTENANCE

ON

FRIENDSHIP CHOICES AND COHESION IN SPORT

A Masters Thesis presented to the Faculty of the

Graduate Program in Exercise and Sport Sciences

Ithaca College

In partial fulfillment of the requirements for the degree

Master of Science

by

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May 2003

Ithaca College

School of Health Sciences and Human Performance

Ithaca, New York

CERTIFICATE OF APPROVAL

MASTER OF SCIENCE THESIS

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ABSTRACT

The Self-Evaluation Maintenance model (SEM; Tesser, 1988) hypothesizes that a person will choose to be close to others who (1) do not out perform them on things that are relevant and thereby do not threaten them by comparison, but (2) do out perform them on things that are irrelevant so that they might bask in reflected glory. The purpose of this study was to apply the SEM model to an athletic setting to investigate the role of performance and relevance of task on closeness of friendships and team cohesion. Based on the SEM model two hypotheses were proposed. First, it was hypothesized that, within an athletic context, an individual would be more likely to choose to be friendly with teammates who performed worse if the task was relevant but who performed better if the task was less relevant. Secondly, it was theorized that team cohesion might also be related to the SEM model. Closeness was measured using the Group Environment Questionnaire (GEQ; Carron et al., 1985), a commonly used measure of task and social cohesion. The GEQ is composed of four subscales: Group Integration-Task (GI-T), Group Integration-Social (GI-S), Individual Attractions to the Group-Task (ATG-T), and Individual Attractions to the Group-Social (ATG-S). Thus, based on the Self-Evaluation Maintenance model it was hypothesized that if relevance of the sport activity was high, the individual would exhibit cohesion to the group surrounding the task, rather than the social environment.

The participants in this study were male undergraduate golfers ($N = 38$), who averaged 21 years of age ($SD = 1.81$) with 7 years ($SD = 2.46$) of competitive golf experience. Difference in performance was measured by comparing each participant's golf scores to the performance of his three closest friends and his three most distant

friends (M = 0.15, SD = 2.98) from at least two tournaments in the spring of 2002. On a scale from zero to 100, the participants were asked to rate how relevant golf was to how they defined themselves (M = 73.79, SD = 27.97) and a common scale was made based on 12 other categories which allowed comparison across participants. The participants also completed Rosenberg's (1965) Self-Esteem Scale (M = 35.43, SD = 2.64). Closeness measures were obtained by a closeness questionnaire (M = 67.23, SD = 25.74) and by the four sub-scales of the GEQ (GI-T: M = 30.89, SD = 5.89; GI-S: M = 23.29, SD = 7.49; ATG-T: M = 25.81, SD = 5.66 and ATG-S: M = 32.32, SD = 7.03, Carron et al., 1985). Analyses indicated that the alpha reliability coefficients for the GI-S, GI-T, and ATG-T were .81, .70, and .99, respectively. The reliability coefficient of the ATG-S sub-scale was significantly weaker (.19). The deletion of item #7 ("I enjoy other parties more than team parties") produced a substantial increase in reliability (.73). As a result, subsequent analyses of cohesion in this study were performed without the use of item #7. Path analysis (AMOS 4.01, SPSS Corp., Chicago) was used to test hypothesized models and to provide guidance/direction for improvement of the models to best fit the sample data.

Six models of friendship choice and cohesion were constructed. Contrary to our initial hypothesis, the first model indicated that participants expressed higher closeness ratings for individuals who outperformed them in golf, and activity relevance was not related to closeness ratings. However, the level of explained variance was very low (6%) indicating that the model was not exhaustive, and a subsequent model was constructed which included self-esteem. Golfers with higher self-esteem expressed closer friendships with teammates who outperformed them, and rated golf of lesser relevance. Similarly, cohesion analyses indicated that golfers with higher self-esteem were less likely to define

themselves in terms of golf. Perceptions of team cohesion were characterized largely by task cohesion, and relevance of the activity was not related to cohesion.

While the present study did not provide direct support for the importance of relevance of golf in relation to closeness, relevance of golf was significantly related to self-esteem. In short, it was found the participants in this study exhibited high self-esteem and surrounded themselves with teammates who were better golfers. Also, the results indicated that the participants were attracted to the team for task reasons. These findings preserve the notion of the SEM model that a person behaves to maintain or increase a positive self-evaluation. Because of the importance of self-esteem, future studies should examine individual friendships on athletic teams but also investigate more thoroughly the importance of self-esteem and its affect on cohesion. Understanding how self-esteem affects cohesion might reveal important information about how and why performance affects cohesion and vice versa.

ACKNOWLEDGEMENTS

I would like to convey my appreciation and thanks to the following people for their assistance and support in this project:

Mor, Bonde og Far for jeres støtte og kærlighed for mig. Jeg håber, at jeg kan være lige så stor støtte for jer fremover. Jeg glæder mig til vi ses igen.

Curtis Collier for your love and faith in me and for encouraging me to keep on keeping on. Thanks for reviewing my writing and giving me constructive feedback.

Dr. Gary Sforzo for guiding me in the right direction and for helping in the process of collecting data.

Dr. Janet Wigglesworth for helping me construct the figures and for helping me finish on time.

Dr. Mary Turner DePalma. Thanks for giving me your idea. Without you, the writing of this thesis would never have begun and also would never have been completed in proper English. Thanks for daily spending time with me and for your willingness to meet with me in the weekends. Thanks for your sense of humor, acceptance, and time commitment. May we meet again!

To God's grace and for always leaving a door open with opportunities to grow and to learn.

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INTRODUCTION

Elucidating the nature of group dynamics, teamwork and individual interactions is essential to understanding human behavior. Gaining insight into these factors is particularly important to understanding behavior in athletic contexts. For example, being a member of a team is often associated with feelings of togetherness, shared goals, and cohesion. Because of the competitive nature of sport, however, cohesion between team members may be weakened by the superior performance of a close other.

A substantial amount of research exists to suggest that team cohesion may be related to athletic performance (Paskevich, Estabrooks, Brawley, & Carron, 2001). For the most part, studies illuminate a positive correlation between these two factors. Mullen and Copper (1994) conducted a meta-analysis showing that 92 percent of 66 tested hypotheses demonstrated a small positive relationship between performance and cohesion. That is, as performance increases, cohesion increases. Likewise, as cohesion increases so does performance. Widmeyer, Carron and Brawley (1993) also indicated that 80 percent of the studies they analyzed showed that higher levels of team cohesion corresponded with better performance. But the vast majority of this research is correlational and no study has identified the precise causal nature of the relationship between cohesion and performance. Note that while these meta-analytic studies highlight the positive relationship between cohesion and performance, they report that a meaningful number of studies show either a negative relationship or the absence of a relationship between cohesion and performance. It is possible that sport psychologists can draw on other disciplines to help explain both the primary performance-cohesion

relationship as well as the conditions under which these negative relationships may be observed. Social psychological research by Tesser (1988) has lead to the development of the Self-Evaluation Maintenance (SEM) model. The SEM model was designed to make specific predictions about the relationship between friendship choice, performance, and the relevance of a specific activity. Consequently, sport psychology research on cohesion and performance combined with social psychological research on friendship choice may offer important insights into discovering the mechanism behind the performance-cohesion relationship. Thus, the purpose of this study was to apply the SEM model to an athletic setting and to investigate the role of performance and relevance of the task on closeness of individual friendships and on cohesion.

Hypotheses

First, it was hypothesized that a golfer would choose to be friends with teammates of lesser golf ability if golf was relevant to how they defined themselves and would be close to more successful golfers if they perceived that golf was not relevant to their own self-definition.

Secondly, it was hypothesized that Tesser's (1988) SEM model could be used to understand the performance-cohesion relationship using the Group Environment Questionnaire (GEQ) as a global measure of closeness of the team. Specifically, it was hypothesized that if golf was highly relevant to the participant, the participant would be associated with the group for primarily task rather than social reasons. The GEQ differentiated whether a person was associated with the group for task or for social reasons.

Significance of the Study

This research contributes to the sport psychology literature in two important ways. First, the athletic venue is an ideal place to apply the predictions of the SEM model. Research on the SEM model strongly supports that a person behaves to maintain a positive self-evaluation. Previous research indicated that relevance, closeness, and performance are interrelated. However, most of the research has been conducted in the laboratory, very few experiments have been conducted outside of the laboratory. While there is every reason to suggest that the SEM model would work in an athletic context (A. Tesser, personal communication, 30 November, 2001) it has not been studied directly in this venue. Thus, this research provides an excellent example of applying this theory outside of the laboratory. Secondly, the importance of introducing a highly tested social psychological model into the field of sport psychology should not be undervalued. This research provides a bridge between two important fields of psychological inquiry. Future sport psychology research should build on the idea of maintaining a positive self-evaluation when investigating the inconsistent findings of the performance-cohesion relationship.

Assumptions of the Study

The assumptions of this study include that the participants comprehended the self-report questionnaires, and completed them honestly. This study was also based on the assumption that in an athletic context it is possible to measure closeness; relevance of golf, and performance. It was assumed that these measurements at a single point in time would accurately reflect a presumed stable relationship between performance, relevance and closeness.

In addition, it was assumed that golf performance would be of higher relevance during the latter stages of the season because of the importance placed on performing well at the upcoming Championship Tournament. It was assumed that each team member would know each other well because they had spent most of at least one season practicing together.

Definition of Terms

1. Cohesion: "A dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (Carron et al., 1998, p. 213). Researchers measure cohesion by four separate subscales of the 18-item Group Environment Questionnaire (GEQ; Carron et al., 1985). The four subscales of the GEQ are Group Integration-Task, Group Integration-Social, Attraction Group-Task, and Attraction Group-Social.

2. Closeness: Closeness between two people was measured by the GEQ and by closeness questionnaires. The closeness questionnaires asked the participants to name their top three closest and most distant teammates. Subsequently, they were asked to

provide a friendship rating from zero (not close at all) to 100 (very close), which measured how close a friend they perceived the teammate to be.

3. Group Integration-Task (GI-T): Five items of the GEQ measured the participant's feelings about the degree to which team closeness centered around the group's task (Carron, Brawley, & Widmeyer, 1985). Scores could range from zero (strongly disagree) to nine (strongly agree) on each item. As a result the total GI-T sub scores could range from zero (low GI-T) to 45 (high GI-T)

4. Group Integration-Social (GI-S): Four items of the GEQ measured the participant's feelings about the degree to which team closeness centered around the group as a social unit (Carron, Brawley, & Widmeyer, 1985). Scores could range from zero (strongly disagree) to nine (strongly agree) on each item. As a result the total GI-S sub scores could range from zero (low GI-S) to 36 (high GI-S).

5. Interpersonal Attraction to the Group-Social (ATG-S): Five items of the GEQ measured the participant's feelings about personal acceptance and social interaction with the group (Carron, Brawley, & Widmeyer, 1985). Scores could range from zero (strongly disagree) to nine (strongly agree) on each item. As a result the total ATG-S sub scores could range from zero (low ATG-S) to 45 (high ATG-S).

6. Interpersonal Attractions to the Group-Task (ATG-T): Four items of the GEQ measured the participant's involvement with the group task (Carron, Brawley, & Widmeyer, 1985). Scores could range from zero (strongly disagree) to nine (strongly agree) on each item. As a result the total ATG-T sub scores could range from zero (low ATG-T) to 36 (high ATG-T).

7. Path Analyses: Path analysis was developed by Sewall Wright to help elucidate the causal models that a researcher formulates on the basis of his knowledge and theoretical considerations. Path analysis was developed to study both the indirect and direct effects between variables. Path analysis is an extension of multiple regression, but each dependent variable is simultaneously regressed onto every independent variable that is predicted to exert some effect. Path analyses were based on covariances and correlations among observed variables (Kline, 1998).

8. Performance: Performance was measured by using scores obtained during the participant's golf season. Scores for each participant were compared to the performance of each individual the participant had listed as a close or distant teammate and a difference score was computed. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his teammate played golf equally well.

9. Relevance: Tesser (1988) stated that a dimension was relevant to an individual's self-definition if the individual would strive for competence on the dimension, describe himself in terms of the dimension, or freely chose to engage in tasks that are related to the dimension. Another's performance is relevant to an individual's self-definition to the extent that the performance is on a dimension that is important to the individual's self-definition and to the extent that other's performance is not so much better or worse than the individual's own performance that comparisons are rendered difficult.

Relevance was measured by having the participants' list how relevant golf was to how they defined themselves on a scale from zero (no relevance) to 100 (highest relevance) in comparison to 12 other categories. Golf relevance was then determined by the following calculation:

$$\frac{\text{Golf relevance rating - lowest relevance rating}}{\text{Highest relevance rating - lowest relevance rating}}$$

10. Self-Evaluation Maintenance (SEM) model: The SEM model states that a person behaves to maintain or increase positive self-evaluation. That is, a person will choose to be close to others who (1) do not out perform them on things that are relevant (self-definitional) but (2) do out perform them on things that are irrelevant (not self-definitional) so that they may bask in reflected glory (Tesser, 1988). "The SEM model assumes that individuals are motivated to maintain a positive self-evaluation and that one's relationship with others have a substantial impact on self-evaluation" (Tesser, Campbell & Smith, 1984, p. 561).

11. Social Cohesion: "The degree to which members of a team like each other and enjoy each other's company" (Weinberg & Gould, 1999, p. 166). Social cohesion was measured by the GEQ subscales: Interpersonal Attraction to the Group-Social (ATG-S) and Group Integration- Social (GI-S).

12. Structural Equation Modeling: "Structural equation modeling is a method for representing dependency relations in multivariate data in the behavioral and social sciences" (McDonald, Ringo, & Moon-Ho, 2002, p. 64).

13. Task Cohesion: "The degree to which members of a group work together to

achieve common goals" (Weinberg & Gould, 1999, p. 166). Two sub-scales of the GEQ measured task cohesion: Interpersonal Attraction to the Group-Task (ATG-T) and Group Integration-task (GI-T).

Delimitations

Relevance, closeness, and self-esteem were assessed only by questionnaires which were chosen or developed specifically for this study.

The study was also delimited by the correlational nature of the design as well as the choice of involving only male collegiate golfers who successfully obtained a position on a collegiate golf team on particular NCAA Division I, Division II, and Division III teams. Finally, each measurement (except for performance) was measured at only a single point in time.

Limitations of the Study

As a result of the delimitations noted above, the present results may apply only to male collegiate golf players who are similar in ability to those in the present study: those that have high self-esteem who do not tend to define themselves by the sport of golf. Weinberg and Gould (1995) contend that issues such as personality type, year in school, and gender also have the potential to affect cohesion on a sports team. In addition, one other limitation is that there were only 38 participants in this study. Notably, this study may not be generalizable to relationships amongst male athletes outside the sport of golf, or female athletes in any sport.

Chapter 2

REVIEW OF LITERATURE

The purpose of the present study was to evaluate whether Tesser's (1988) SEM model would, in an athletic context, explain both individual friendship choices and team cohesion based on an understanding of performance differences and activity relevance. As a result, it is important to gain a thorough understanding of the SEM model through a presentation of previous research in the area.

The first part of this chapter centers on the empirical foundation of the SEM model, as well as an explication of the predictions of the model. Previous research is categorized into sections that address instances in which each specific variable (closeness, performance and relevance of the activity) has been successfully predicted. This chapter will only highlight a few of the more relevant studies predicting each of the variables, because an exhaustive presentation of research on the SEM model is not possible here. In order to further understand how the SEM model is connected to self-esteem maintenance, a subsequent section presents how the self-evaluation maintenance model connects to research conducted on self-esteem.

The remainder of this chapter is then devoted to how the SEM model might work in an athletic context and, more specifically, how the SEM model corresponds to work conducted in the area of team cohesion. Different aspects of cohesion are developed, including task and social cohesion, and this distinction is followed by a presentation of work on how cohesion may impact performance (and vice versa).

The Foundation of the Self-Evaluation Maintenance Model

The SEM model originates out of Festinger's (1954) Social Comparison Theory. Social Comparison Theory states that people in general want to understand the world and do so by comparing themselves to others. In a sports situation for example, Social Comparison Theory implies that comparing one's performance to that of others will significantly impact how one's own performance is perceived. A person can perceive his or her own performance to be better, worse or the same as the performance of another person when competing in the same activity.

Social psychological research by Tesser (1988) has lead to the development of the SEM model. The basic assumption of the SEM model is that when comparing one's own performance to others, a person will seek to maintain or enhance how they evaluate themselves. This model makes specific predictions about how performance will affect closeness of the relationship with others and how relevant a specific activity is perceived. Twenty years of research on the SEM model offers convincing support for its predictions that a person will choose to be close to others who (1) do not outperform them on things that are relevant (self-definitional) and thereby do not threaten them by comparison, but (2) do outperform them on things that are irrelevant (not self-definitional) so that they might bask in reflected glory (Tesser, 1988). Thus, the SEM model makes specific predictions about when and how comparison to others is going to impact closeness. Those predictions are based largely on personal task performance and on activity relevance.

Since the early eighties, researchers have consistently found that a change in closeness, performance, or relevance of the activity will lead to specific and predictable

changes in at least one of the remaining two variables (Tesser, Campbell & Smith, 1984). The premise of the model is that when a person's self-evaluation is threatened, he or she will adjust to that threat by altering performance, relevance or closeness. Hence, the association between two people (closeness), the perceived quality of accomplishments (performance), and/or the extent to which the performance is on a dimension perceived to be important to one's self-definition (relevance) may be affected by a threat to a person's self-evaluation (Tesser, Campbell & Smith, 1984).

Figure 1 represents a visual illustration of the SEM model. As can be seen from this figure, whether a task is relevant or irrelevant determines how a person is going to behave. The first part of the model illustrates that if a task is highly relevant to how a person defines him or herself, the person will choose to be close to others who perform slightly worse, because he or she does not pose a threat to how the person defines him or herself. However, if the other person performs slightly better, the person will distance them and not be as close. Being close to someone who is performing better on a relevant dimension threatens self-evaluation. In a sports setting, this model implies that a golfer to whom golf is highly relevant will tend not to be close friends with a teammate who is performing better, but would tend to be close friends with someone who is performing just slightly worse to avoid feeling threatened by the teammate's better performance.

The second part of Figure 1 shows that a person will behave differently if the task is irrelevant. If the task is irrelevant a person will distance themselves from people who are performing worse, because nothing is going to be gained from being associated with that person. Interestingly, a person will choose to be close to a person who performs

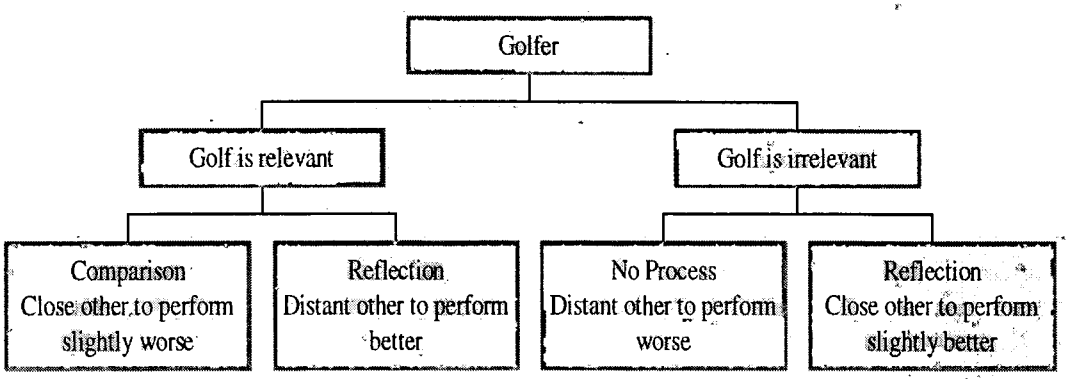


Figure 1. The Self-Evaluation Maintenance model as proposed by Tesser (1988). This model has been modified to reflect the friendship choices of a golfer.

better on a task that is irrelevant. Being close to another person who is a better performer enables the person to bask in the glory that the other has achieved. By reflection, this association will maintain or increase one's own self-evaluation. For example, a golfer who believes golf to be irrelevant to how he defines himself may choose to be close friends with the best golfer on the team so that he can bask in the glory that this teammate offers.

Thus, Figure 1 illustrates that a person will try to maintain positive self-evaluation and if necessary, distance others who perform better on a relevant dimension and get closer to those who outperform them on an irrelevant dimension. Also, a person may alter the relevance of the task based on perceived performance and the value placed on a close other.

Prediction of Closeness

Tesser's SEM model has been tested by several researchers since the early eighties (Tesser & Paulhus, 1983; Reeves & Tesser, 1985). Researchers were mainly interested in how manipulation of one or two of the primary variables would affect the third. Pleban and Tesser (1981) initiated some of the early work predicting closeness. They hypothesized that when an activity was perceived as relevant to two strong performers, the relationship between the two people would not be characterized as a close friendship. When relevance of the activity was low and the other person performed better, the relationship would be characterized as close.

In order to test these predictions, Pleban and Tesser (1981) recruited male undergraduates ($N = 120$) who were enrolled in an introductory psychology course. Each participant was paired with a confederate. The participant was then asked to indicate the

interest and knowledge he had in certain topics (football, rock music, television, world events, hunting, and photography). If the participant had a lot of knowledge and interest in a certain topic, it was considered to be highly relevant. If the participants showed no interest and little knowledge, the topic was considered to be of lesser relevance. The participant was then asked 30 questions pertaining to the most highly relevant topic. After the examination, the participants were told that they scored around average but that the confederate's score was either in the 80th, 60th, 40th or 20th percentile. That is, in some situations the confederate had a better score than the participant and in other situations the participant outperformed the confederate. To measure closeness, the participants and the confederate were directed to a different room to sit down and complete an additional questionnaire. Closeness was measured both from the physical distance between the confederate and the participant, and through a questionnaire. The questionnaire consisted of three types of questions which measured a cognitive ("How much do you like this person?"), an affective ("Do you feel that you and the other person are similar in general?") and a behavioral closeness ("Would you like to work with this person again?"). The results of this study showed that the comparison process leads to either a distancing of another person or to becoming closer depending on the other person's level of performance and how relevant the activity was. If another's performance was better on a dimension that was relevant to the participants' self-definition, the person tended to distance the other person -- theoretically to protect self-esteem.

Similarly, Yinon, Bizman, and Yagil (1989) conducted a study with boys ($N = 65$) and girls ($N = 72$) from 7th and 8th grade classes in Israel. The children were administered the MILTA intelligence test which was perceived as highly relevant to the

students. The children were also tested on a literature test that the researchers believed to be irrelevant to most students. The results of the questionnaire indicated that the intelligence test was more important than the literature test. Closeness was measured through an extended version of the Interpersonal Relationship Assessment Technique (IRAT) that measured the desire to be best friends with specific individuals, as well as through questions that described close friendships (e.g., "What is your desire to meet in the afternoon?"). The participants received their test scores after one week. The scores were manipulated to fall in the range of 75 to 82 points. The children were then randomly assigned to one of four groups in which the participants were exposed to either an individual who performed in a superior or similar manner on 1) the intelligence test (high relevance) and 2) the literature test (low relevance). Participants in all four groups were then instructed to rate how similar they perceived the other to be, how relevant the two tasks were, and the extent to which they compared themselves to others. The results indicated that the participants were more motivated to interact with another person in order to improve their own performance. Thus, the children tended to interact with a better performing other when the performance reflected an area in which they were expected to reach excellence.

More recent work continues to support the assumptions of the SEM model. Most recently, Schmitt, Silvia, and Branscombe (2000) conducted a study to predict closeness. They tested female undergraduates ($N = 47$) on how willing they were to identify and compare to an in-group member who highly outperformed the participants. The participants first completed a 15-item gender group identification measure and then were categorized as to whether they were low or high in gender group identification. The

participants were told that they were being evaluated on a creativity test in comparison to men. They completed a very difficult creativity test in which only 3-4 questions were answered correctly out of 13. Then the participants were told to read about a previous participant in the study who had answered 9 out of 13 items correctly. To measure closeness, the participant was then asked to respond to 8 statements about their impression of the participant who clearly outperformed the current participant. The questions were, for example "This person is someone that I could be close to" or "This person is someone that I would like to have as a close friend." The participant was also asked to answer questions pertaining to their own performance to ensure that the participant did in fact perceive the previous participant's performance accurately. The participant was also asked to answer questions pertaining to a previous participant who had performed worse. It was found that the participant preferred to be close to the participant who scored lower on the creativity test rather than the person who scored higher on the creativity test. This study supported the hypothesis that people will try to protect their own self-evaluation by distancing themselves from someone who clearly outperforms them on a relevant task.

Prediction of Performance

It is clear that manipulation of performance differences and relevance are related to how close the person chooses to be to others. Other researchers have been successful in predicting performance. Tesser, Campbell and Smith (1984) conducted three studies on the effect of relevance and closeness on performance. These three studies were designed to measure students' ratings of their performance, teachers' ratings of performance, and their actual performance on arithmetic. In study 1, fifth and six graders

($N = 270$) enrolled in 16 classes were asked to name a classmate with whom he or she most and least preferred to spend time. As a measure of relevance, each participant was given a list of activities from several categories (e.g., academics, sports, arts, and music) and was asked to pick the activities that were most and next most important and least and next to least important. One week later, each participant rated his or her own performance on the most and least relevant activities on a five-point scale. Also, the participant was asked to rate the performance of their closest and most distant friends on these activities. In support of the SEM model they found that participants reported that their own performance was better than their close classmates' performance on the relevant activity, but was worse than their close classmate's performance on the irrelevant activity.

In study 2 (Tesser et al., 1984), teachers ($N = 16$) were asked to rate the participants of Study 1 on what they though would be most and least important to the participant. The teachers were also asked to rate the person closest and most distant to each specific participant. The study showed that self and close others were rated as similar in overall performance. The study also found that the biggest discrepancy between participants and teachers were the ratings of distant classmates. The teachers' ratings of performance showed that the participants overrated their own performance on a relevant activity and tended to underrate their performance on an irrelevant activity. Also, the study showed that the closer classmates' performance was underrated by the participants on their relevant activities and was overrated in their irrelevant activities.

In study 3 (Tesser et al., 1984), school records on the arithmetic grade-point average scores were recorded for the participant, the close classmate and the distant classmate. Self-esteem was measured by the Piers-Harris Children's self-concept scale.

The results of this study were in accordance with the SEM model. That is, the participant did relatively better than the close classmate on a relevant dimension and the classmate did relatively better on the irrelevant dimension. Based on this study, Tesser et al. (1984) noted that a person with high self-esteem does not see others as a threat as easy as does a person with low self-esteem. A person high in self-esteem may be more likely to choose to interact with a person high in performance because it is not seen as a threat to their self-evaluation.

While the previous research showed the importance of the SEM model in fifth and six graders, other studies have shown similar effects in college students at the University of Georgia. Reeves and Tesser (1985) tested the SEM model on undergraduates and their association with sport teams from different colleges. They predicted that to maintain high self-evaluation, students would prefer to see a close school win more in a less relevant sport, and to see a more distant school to win more in a highly relevant sport. The participants filled out a sports team questionnaire in which they responded to an imagined sports competition between Georgia and a conference opponent in football (high-relevance) and in water polo (low-relevance). On a seven-point scale the participant listed how strongly they preferred to see Georgia's opponents win. Closeness of the other schools was measured on a four-point scale based on how often the participant listed the name of another school. The researchers assumed that close schools were thought to come to mind more often than distant schools. The results of the study support the SEM model predictions that participants preferred close schools to win more than distant schools on an irrelevant dimension but preferred distant opponents to win more on a relevant dimension.

Other studies have been conducted to investigate how perceptions of one's own performance are related to how others perform. Kulik and Gump (1997) hypothesized that perceptions of one's own performance could be affected by another's performance. Kulik and Gump measured male undergraduate's ($N = 90$) affective reaction (proud, satisfied, disappointed) to their relative standings on a cold pressor task (worse, better or similar) to that of a close other. They found that in accordance with the SEM model, the participants were more positive when their own performance was superior rather than inferior to another person. This study showed that the better another performs relative to the self, the less relevant is the performance dimension if the other is close. A threat of comparison results from the better performance of a close other on a relevant dimension. The promise of reflection results from good performance from a close other on an irrelevant dimension. This study indicated that when another person performs better on a relevant dimension greater anger, contempt, disgust, envy, frustration, jealousy, sadness, and shame are associated with the one who performs better, particularly when the situation is relevant.

The SEM model suggests that one may actually lower one's own performance to avoid these negative comparison processes. According to Tesser, Campbell and Smith (1984) being close to a high performing other can make an individual's performance look bad by comparison. However, an individual's self-evaluation may not be threatened by a strong performing other, regardless of how close the relationship is, but may instead bask in the reflected glory of another's accomplishments if the task is perceived irrelevant. Given that performance is so important to who a person chooses to interact with, it is important to remember that the crucial aspect in how close a person chooses to be to a

better performing other depends on the relevance of the activity. Recall that the SEM model predicts that a person will choose to be closer to a better performing other if the task is relevant but distance a better performing other if the task is relevant. While the above studies underscored the importance of performance and closeness, the following section is dedicated to highlighting the importance of relevance.

Prediction of Relevance

Prediction of relevance is relatively infrequent in tests of the SEM model. More often, relevance has been used to predict the relationship between closeness and performance. However, a few studies have been conducted that find it is possible to predict relevance from changes in closeness and performance. Tesser and Paulhus (1983) hypothesized that changes in relevance of an activity could be changed by the threat of a close other's superior performance. Males ($N = 96$) from an introductory psychology class were paired based on a pre-test on similarity and were led to believe that they were similar. Then, the participant was invited to play a game on the computer. The participant was led to believe that the score from the computer game was an accurate measure of ability, logic, speed of reaction, and length of time the participant could avoid interception. However, the participant's score was manipulated in order to be able to divide the group into high and low performers. The participant was told the manipulated score and was then left alone. When the experimenter entered the room again, the participant was made aware of his score in comparison to others and then asked to fill out a questionnaire pertaining to how relevant the score of the computer game was and to how he evaluated himself. It was found that that an attribute is made less relevant to the

extent that another person who is perceived to be similar outperforms an individual. That is, when outperformed by a similar other, a person might rate an activity as less relevant.

A more recent study by Tesser, Crepaz, Collins, Cornell, and Beach (2000) highlights the importance of relevance. They conducted three experiments with undergraduate males ($N = 64$). Fifty percent of the participants were asked to write about a time in which a close friend had outperformed them when it was important to do well (relevant task). The other group was asked to write about a time when the participant outperformed a close friend when it was important to do well (relevant task). The participant was asked to write about values and feelings that arose from the situation, and how the incident effected their mutual relationship. Four judges unfamiliar with the hypotheses were then asked to answer various questions regarding values, feelings and importance of the task. In addition, the participant was asked to rate the relevance of the task through a post-experimental questionnaire, which measured the importance of the task. Consistent with the SEM model, participants who had been asked to write about a negative experience found the task to be less relevant whereas the participants who were asked to write about a positive experience rated the importance of the task to be highly relevant. This study implies that people may try to regulate their self-evaluation by changing relevance of their performance and of the task in order to protect their own self-evaluation.

Self-Esteem and the Self-Evaluation Maintenance Model

While research supports the predictions of the SEM model regarding closeness, performance and relevance, more recent research has incorporated the role of self-esteem into the model. Four experiments by Rudich and Vallacher (1999) on undergraduate

males (N = 109) and females (N = 195) investigated who people with varying self-esteem levels chose as evaluators. In four studies, participants were asked to choose to interact with one of two evaluators who provided either positive or negative feedback indicating more or less acceptance. Rudich and Vallacher hypothesized that participants with high self-esteem would choose to interact with someone who provided positive feedback regardless of his or her interest in forming relationships, whereas participants with low self-esteem would choose to interact with someone who expressed interest in forming a relationship, regardless of his or her assessment of their personalities. Thus, in these four studies, the experimenters' attitudes towards the participant were manipulated to show either positive or negative feedback and whether the experimenter was interested in forming a relationship. Several questionnaires (e.g., social self-esteem, need for affiliation, self-consciousness and social anxiety) were distributed to each participant. After completion of the questionnaires, the participants were told that two different experimenters had evaluated their test. The participant read both evaluations and found that one evaluation was very negative and one was positive. Each evaluation then went on to express the evaluator's attitude about interacting with the participant. After having read the evaluations the participant was asked to choose which evaluator they would prefer to talk to for 30 minutes. Rudich and Valacher found that a person with low self-esteem showed a heightened need for affiliation which was related to belongingness concerns and low levels of sociability. These results also demonstrated an important link between self-esteem and the choice of interaction partners. Individuals high in self-esteem preferred an evaluator who satisfied their needs for self-enhancement and self-esteem concerns. Individuals with low or moderate self-esteem chose to interact with the

person they felt was most likely to confirm their own low level of self-regard and tolerate their perceived short-comings. Finally, this study showed that people would rather interact with someone who has a positive view of them and who expresses desire to have an interaction than with someone who has a negative view of them and expresses little interest in having an interaction despite level of self-esteem. This suggested that an individual with a low self-esteem presumably would be insecure in his social relations and looked for signs of acceptance. In comparison, someone with a relatively high self-esteem focused on maintaining his level of self-regard and thus chose to interact with those who were more likely to provide favorable feedback.

In another study, Wood, Giordano-Beeck, and Ducharme (1999) conducted three experiments in which they hypothesized that individuals high in self-esteem who failed at a given task would be more likely to compare themselves to those who performed worse than they did to compensate for their performance failure. Wood et al. found that high self-esteem participants who were in a failure condition sought more comparison when they believed that comparison would occur in their areas of strength than when they believed comparison would occur in their areas of weakness. This experiment showed that people seek to maintain rather than to maximize their self worth. These experiments showed that when the high self-esteem participants had already compensated for their failure through self-affirmation they had less desire to seek comparison. Consistent with the SEM model, these studies confirm that people seek to maintain their self-worth and that they can do that by comparison. While these studies investigate individual friendships choices, a more global assessment of cohesiveness of groups and teams has also been investigated in the athletic venue.

Cohesion

In 1950, Festinger, Schacter, and Back defined cohesion as "the total field of forces which act on members to remain in the group" (Weinberg & Gould, 1999, p.166). An individual's desire to be involved with a group's activities (attractiveness to the group), and the benefits that a member can derive from being associated with the group (means control) determine the strength of the cohesion (Weinberg & Gould, 1999). Carron, Brawley, and Widmeyer (1998) subsequently modified this definition to incorporate the complexity of variables that impact cohesion. They proposed that cohesion is:

> A dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs. (p.213)

In short, this definition reflects the idea that cohesion is dynamic, multidimensional, instrumental, and affective.

A social learning process characterizes the development of cohesion as athletes interact with each other and their environment (Paskevich, Estabrooks, Brawley & Carron, 2001). Cohesion evolves over time as the group interacts and begins to share common beliefs and goals. Weinberg and Gould (1999) stated, "the distinguishing characteristics of sport and exercise groups are a collective identity, a sense of shared purpose or objectives, structured modes of communication, personal or task interdependence (or both), and interpersonal attraction (p.147)". Group perceptions as well as individual perceptions are important aspects of cohesion.

In an attempt to explain both individual and group aspects of cohesion, Carron, Widmeyer and Brawley (1985) proposed a conceptual model that takes into consideration

how each group member integrates information that is relevant and meaningful to the group such that a variety of perceptions and beliefs are generated (Paskevich et al., 2001). Group integration and individual attraction to the group are two different dimensions that may affect cohesion on the team. In addition, group integration reflects the individual's beliefs and perceptions about the group whereas the individual attraction to the group represents what initially drew the individual to join the group and continues to attract the group member. Group members may be attracted to the specific group because they believe that the group can meet task and/or social needs (Paskevich et al., 2001).

Task and Social Cohesion

More recent research has emphasized the importance of differentiating between task and social cohesion (Paskevich et al., 2001). Weinberg and Gould (1999) suggested that task cohesion reflects how group members work effectively together to reach common goals, whereas social cohesion reflects how well teammates like one another. According to Wann (1997), a team can display both task and social cohesion independently depending on a variety of intervening variables. That is, a team may show cohesive tendencies regardless of whether a team member chooses to interact with the group because of the task, because of the social environment, or because of both. An individual is typically initially drawn to a group because of an interest in the group task. Once the task orientation is incorporated within the group, social orientation emerges as a result of the increase in social interaction. Research has indicated that new teams would be best characterized by task cohesion, whereas teams of long-standing experience will exhibit both task and social cohesion (Paskevich et al., 2001). As a result, Carron et al. (1985) proposed a conceptual model with four dimensions that characterize the dynamic

processes of cohesion. These dimensions vary on whether the individual perceives the group to reflect a task orientation or social orientation, the individual attraction to the group, or the group integration:

Individual Attractions to the Group – Task (ATG-T),

Group Integration - Task (GI-T);

Individual Attractions to the Group – Social (ATG-S), and

Group Integration-Social (GI-S).

The model anticipates that these four dimensions vary over time and originate out of the original task orientation (ATG-T). Over time, as the group develops, the focus transfers from attraction to the group - task (ATG-T) into a more socially integrated group orientation (GI-S). Thus, the task or social motivational nature of the group, the team history, and the stages of group development all act as moderating variables on cohesion.

The social environment may also affect cohesion. Weinberg and Gould (1999) suggested that environmental factors, personal factors, leadership factors, and team factors affect cohesion. Environmental factors refer to the normative forces that bind a group together and remain relatively constant throughout a season. For example, level of competition, distinctiveness, and team size is going to affect the degree and type of cohesion found on a team. Personal factors refer to individual characteristics of team members and vary depending on each individual member of the group. Attitude similarity, aspirations, commitments, individuals' perceptions of the group, expectations for individual behavior, and codes of conduct for practices, games, and social situations may effect cohesion. Leadership styles by coaches and teammates also have the potential

to impact cohesion. Team factors are also important when a team forms and develops unique characteristics that are related to group roles and to group norms. Team factors such as group positions, formal and informal roles, and norms may all affect both task and social cohesion on a team.

In addition, the type of sport may affect the degree to which task cohesion develops. Weinberg and Gould (1999) differentiated sports based on the necessity for group members to work together to achieve common goals. The three different categories that emerge are coacting (low degree of task cohesion), mixed coacting-interacting (moderate degree of task cohesion) and interacting (high degree of task cohesion). Coacting teams can be identified in individual sports such as tennis and golf where a team member is not dependent on another teammate while performing. Team success on a coacting team is typically determined by the sum of individual performances (Williams & Widmeyer, 1991). Mixed coacting-interacting sports such as relay teams and baseball require that team members work together to some degree. Interacting teams are represented by sports like basketball and soccer where the team's performance is closely related to how well the teams work together.

Performance – Cohesion Relationship

There has historically been a great deal of interest in the relationship between cohesion and performance. Widmeyer et al. (1993) revealed that 80 percent of the studies they analyzed on the performance-cohesion relationship showed a positive performance-cohesion relationship. Thus, cohesion may increase performance and the effect of increased performance may be related to an increase in cohesion. Wann (1997) added to the findings by suggesting that performance tends to impact cohesion more

significantly than cohesion affects performance. Wann (1997) stated that team cohesion is both a cause of and a consequence of performance, but he speculated that cohesion is primarily a consequence of performance. Paskevich et al. (2001), however, noted that so far, research has had limited success in determining whether a circular relationship does exist, and this research has not been able to answer whether cohesion effects performance or if performance effects cohesion. A more recent meta-analytic study by Carron, Colman, Wheeler, and Stevens (2002) specifically targeted toward sports team found that there was no difference between the cohesion-to-performance and the performance- to-cohesion relationship.

A meta-analytic study by Mullen and Copper (1994) examined the overall significance and strength of the performance-cohesion relationship. They found that 92 percent of 66 empirical studies showed a positive relationship whereas the remaining 8 percent showed a negative or an absence of relationship between performance and cohesion. There seems to be some consensus that cohesion can lead to an increased performance but occasionally increased cohesion may lead to worse performance. Carron, Prapavesis and Grove (1994) suggested that in certain situations cohesion may actually be unfavorable to performance. They suggested that team cohesion might be viewed by athletes from two perspectives: (1) as a psychological benefit and (2) and/or as a psychological cost (Paskevich et al., 2001, p.484). For example, Carron et al. (1994) found that athletes with self-handicapping tendencies were more likely to lower their own performance when cohesion on the team was high in order to protect their own self-esteem.

Carron et al. (2002) also suggested that task and social cohesion may contribute to better performance, while better performance may contribute to better task and social cohesion. Though not significant, this analysis revealed that social cohesion showed a slightly stronger relationship with performance than did task cohesion. This contradicts findings from Mullen and Copper (1994), who found that the performance-cohesion relationship was significantly affected by task commitment.

Mullen and Copper (1994) suggested that real groups were more cohesive due to a shared history. The effects were stronger in real sports groups than in artificial groups because such relationships were hard to replicate in a laboratory setting (Mullen & Copper, 1994). Noteworthy, Carron et al. (2002) found that the performance-cohesion relationship was stronger for female sport groups than the performance-cohesion relationship for males sport groups. Finally, Mullen and Copper (1994) found that the performance-cohesion relationship was stronger in smaller groups than in larger groups.

Until recently, the general belief has been that there is a positive relationship between cohesion and performance for interactive tasks, while no relation or a negative relationship would exist between cohesion and performance for coactive tasks (Wann, 1997). However, research by Williams and Widemeyer (1991) examined the performance-cohesion relationship in golf (a coacting sport) and found that task cohesion was the best predictor of performance, explaining 13 percent of the variance. Carron et al. (2002) indicated that type of sport and interaction does not moderate the performance-cohesion relationship. Their meta-analysis showed that the performance-cohesion relationship existed in all sports, but may fluctuate a little across sports and different levels of competition.

Most studies seem to agree that better cohesion typically leads to better performance and vice versa. While most studies on the performance-cohesion relationship are positive, some are also negative. No studies have yet been able to identify why some research reflects a negative performance-cohesion relationship. So far, these effects have been explained away by inconsistencies in measuring cohesion and other confounding variables. Williams and Widmeyer (1991) addressed the failure to distinguish between social and task cohesion as a contributing factor for the inconsistent performance-cohesion relationship. Consequently, Paskevich et al. (2001) suggested that future research should begin to address specific mechanisms for the effects of the different types of groups and dimensions of cohesion. Carron et al. (2002) also noted that empirical data of the conceptual model of cohesion would be helpful in order to understand cohesion better. In other words, we need to better understand the "why" of the performance-cohesion relationship and how performance is affected by both task and social cohesion.

Summary of Literature

In summary, it can be concluded from the research on the SEM model (Tesser, 1988; Tesser & Campbell, 1984) that a person does behave to increase or maintain positive self-evaluation and does so by distancing themselves from others, or alters activity relevance or their performance. These variables, closeness, performance, and relevance have provided the mechanism for the SEM model and thus provided an understanding of friendship choices. Other fields, such as sport psychology, have not directly looked at individual friendship choices but typically examine the global aspect of cohesion on sports teams. This type of research has investigated the relationship between

performance and cohesion but has not yet identified precisely how this relationship might work.

Consequently, sport psychology research on cohesion and performance combined with social psychological research on friendship choice may offer important insights into discovering the mechanism behind the performance-cohesion relationship.

Chapter 3

METHODS AND PROCEDURES

The purpose of this study was to apply the SEM model to an athletic setting and to investigate the role of performance and relevance on closeness of individual friendships and team cohesion. This chapter delineates the methods used in this study and includes the following sections: (a) design and procedure, (b) participants, (c) materials, and (d) treatment of data.

Design and Procedure

Permission to contact golf coaches at the Lafayette Golf Invitational (Lopatcong, New Jersey) was granted by the Invitational Director one week prior to the Invitational. This invitational occurred 1-2 weeks before the Conference Championship. This later date in the season allowed the team an opportunity to develop both social and task cohesion (Weinberg & Gould, 1999). In addition, it was assumed that golf performance would be of higher relevance during these latter stages of the season because of the importance placed on performing well at the upcoming Championship Tournament.

At the Lafayette Invitational the investigator approached each individual golf coach. The purpose of the study and the importance of participating were briefly explained (see Appendix A). Twelve coaches agreed to let their team participate. Each coach was asked to sign an informed consent form (see Appendix B) and return it with the testing packages. Each coach was instructed to distribute a testing package to each of the five tournament players as well as to the members of their team that were not present at the Lafayette Golf Invitational. Each participating athlete received a testing package which contained a letter (see Appendix C), informed consent form (see Appendix D), a

cover page (see Appendix E), the Group Environment Questionnaire (see Appendix F), relevance questionnaires (see Appendix G), closeness questionnaire (see Appendix H), performance questionnaire (see Appendix I) and Rosenberg's Self-Esteem Scale (see Appendix J). The coach was also given instructions to deliver a debriefing statement (see Appendix K) when the participant returned the testing package. In addition to the verbal instructions, the coach was provided with written instructions (see Appendix L). Finally, the coach was asked to return all the completed testing packages to the experimenter. Following the distribution of the testing packages, follow-up calls and emails were made to the coaches as well as to individual participants. Five coaches returned the testing package. In addition to the teams participating in the tournament, a nearby university was contacted and asked to participate in the study as well. This university agreed to participate and was provided with identical material and information.

Participants

The participants in this study were male golf players ($N = 38$) representing various Division I, II and III golf teams. The participants' coaches were contacted at the Lafayette Golf Invitational 2002 (Lopatcong, New Jersey) for permission to recruit their athletes to participate in the present study. Twelve coaches agreed to allow their golf team to participate. Men's golf teams were chosen based on both theoretical and practical reasoning. First, previous studies on the SEM model have been conducted largely with males (Tesser & Paulhus, 1983; Kulip & Gump, 1997; Tesser et al., 2000). In studies that did include males and females, the comparison process was found to be stronger and more important for males than for females (Tesser, 1988). In addition, the choice to restrict the subject pool to males was based on the practical fact that more universities

sponsor men's than women's golf programs. In the NCAA (2002), there were 717 participating men's golf teams versus only 402 participating women's golf teams

Materials

Each contacted coach was asked to distribute a testing package to each of his players. The testing package included a formal letter (see Appendix C) and an informed consent form (see Appendix D). In addition, the testing package included six questionnaires which measured: demographic information (see Appendix E), closeness (see Appendix F & Appendix H), relevance (see Appendix G), performance (see Appendix I), and self-esteem (see Appendix J).

Demographic Information

Each participant was asked to provide their date of birth, sex, year in school, and the number of years they had played golf competitively. The participants were then asked to describe their skill level in golf compared to their teammates. Finally, the participants were asked to provide the name of their educational institution (see Appendix E).

Closeness Questionnaires

Closeness on the team was measured by both the Group Environment Questionnaire (GEQ; see Appendix F) as well as through a questionnaire regarding specific friendship choices on the team (see Appendix H).

The Group Environment Questionnaire. Brawley, Carron, and Widmeyer (1985) developed the GEQ to measure the dynamic that develops as a group becomes cohesive. The GEQ is composed of 18 items presented on a 9 point scale anchored at the extremes by strongly disagree (1) to strongly agree (9). The GEQ was used to assess the

participants' perceptions of the task and social aspects of the team as a totality as well as the participant's attraction to the team. Four aspects of cohesion were measured: Group Integration - Task (GI-T); Group Integration - Social (GI-S); Individual Attractions to the Group - Task (ATG-T), and Individual Attractions to the Group - Social (ATG-S). The scores on each specific sub-scale were computed by summing the ratings from the relevant items. The score of each specific scale was computed and stronger agreement represented greater perceptions of cohesion. Items 1-4, 6-8, 11, 13-14, 17-18 were negatively worded and reverse coded.

Five items measured *Group Integration - Task (GI-T).* These five were items 10, 12, 14, 16, and 18. These items asked for participants' perceptions about the similarity, closeness, and bonding around the task. For example, the item, "Our team is united in trying to reach its goals for performance" is included in the GI-T.

Four items measured *Group Integration - Social (GI-S).* These 4 were items 11, 13, 15, and 17. These items measured the participants' perceptions about the similarity, closeness, and bonding around social aspects. The item, "Our team would like to spend time together in the off season" is included in the GI-S.

Four items measured *Individual Attractions to the Group – Task (ATG-T).* These four were items 2, 4, 6, and 8. These items asked for participants' perceptions about personal involvement with the group task, productivity, goals, and objectives. The item "I am not happy with the playing time I get" is included in the ATG-T.

Five items measured *Individual Attractions to the Group – Social (ATG-*S). These 5 were items 1, 3, 5, 7, and 9. These items asked for the participants' perceptions

about personal involvement, acceptance, and social interaction with the group. The item "I do not enjoy being a part of the social activities of this team" is included in the ATG-S.

Paskevich et al. (2001) reported the GEQ to be internally consistent and contended that it demonstrated face, concurrent, and predictive validity. Widmeyer, Brawley and Carron (1985) reported the alpha reliability coefficients to be 0.75 (ATG-T), 0.64 (ATG-S), 0.70 (GI-T), and 0.76 (GI-S).

Friendship Choices. Individual friendship choices were also recorded through a second closeness questionnaire (see Appendix H). Similar to Tesser, Campbell and Smith (1984) the participants were asked to list their three closest friends and their three most distant friends on the team. They were then asked to provide a closeness rating ranging from not being very close (0) to being very close (100). The teammate with the highest rating represented the closest friend on the team. Similarly, the teammate with the lowest rating represented the teammate to which the participant felt most distant. The directions noted that the participant might consider all teammates friends and that by rating another teammate lower, they were not necessarily expressing dislike for their teammate. It was explained that it was natural and inevitable to be friendlier with some people than with others. In an open-ended format, the participants were also asked what they thought made someone a close friend in general.

Relevance Questionnaire

Research on the SEM model highlighted the importance of how relevant a task was to how the participants defined themselves (Tesser & Campbell, 1984). In the development of a relevance questionnaire, a pilot study was conducted on college students in an introductory psychology class at Ithaca College ($N = 42$). These

participants were asked to list the top ten priorities in their lives. From the pilot study, 12 categories of relevance emerged which included academics, adventure, career, family, friends, happiness, religion, respect, sleep, success, values/morals and wealth. These 12 categories were used to develop a "relevance" questionnaire and golf was added so that the relevance category consisted of 13 items. The participants in the present study were asked to rate each given category with a number ranging from no relevance (0) to highest relevance (100). The participants were asked to place the highest ratings on those items that were most closely related to the way in which they defined themselves. Furthermore, it was specified that the category with utmost relevance should receive the highest rating (see Appendix G). Golf relevance was then determined by the following calculation:

$$\frac{\text{Golf relevance rating - lowest relevance rating}}{\text{Highest relevance rating - lowest relevance rating}}$$

Thus, the relevance score provided a measure of how relevant golf was in comparison to other relevant categories. By using this calculation, a common scale for relevance was achieved which allowed comparison across participants.

Performance Questionnaire

Performance was obtained by contacting the sports information director of each school to receive results of each participant's performance throughout the year. The scores from a maximum of three tournaments were recorded for each participant and paired with the names that the participant had listed as being close or distant friends. The difference in performance between the participant and his respective six teammates were computed for each tournament. Then the average mean score of difference across all common tournaments for the 2002 season between the participant and the respective friend were found. With respect to golf, the lower the actual score from the tournament

the better was the performance. Therefore, a negative mean score performance difference indicated that the participant was a better performer than his teammate, and a positive mean score indicated that the friend was a better performer. A mean average score difference of zero indicated that the participant and his friend played golf equally well.

Self-Esteem Questionnaire

The purpose of Rosenberg's Self-Esteem Scale was to measure the participants' self-esteem. According to Blascovich and Tomaka (1991), Rosenberg's Self-Esteem Scale is widely used and evidences substantial reliability (.88) and validity (.77). An example of one item on Rosenberg's (1965) Self-Esteem Scale read as follows: "I feel that I am a person of worth, at least on equal plane with others." Each response ranged from strongly agree (1) to strongly disagree (4). The higher the sum of these scores, the higher was the individual's self-esteem. The possible range of scores was from 10 to 40. Items 1, 2, 4, 6, and 7 were negatively worded and reverse scored.

Treatment of Data

After participants' responses were collected all data were recorded. Descriptive statistics were computed using SPSS and a correlation matrix was created for each of the primary tested variables. A hypothesized model was developed based on the SEM model literature. Path analysis was used to test the hypothesized model and to provide guidance/direction for improvement of the model. Amos 4.01 (SPPS Corp., Chicago) was used to test how the models best fit the sample data. The criteria used to assess the model fit statistics were based on the work of Kline (1998), Maruyama (1998) and Byrne (2001) and are summarized in Table 1.

Table 1

Criteria used in the assessment of good model fit statistics

Criteria	*Critical Value Description*
Small Sample Size	(*N*) < 100
Chi Square (χ^2)	Zero indicated good model fit statistics A value of 1.96 was significant at p = .05. A value of 2.225 was significant at p = .01. A low χ^2 value and non-significant critical values were desired goodness-of-fit statistics.
χ^2 / *df*	< 3 is considered a good fit
GFI	1 is considered a good fit
CFI	0.90 = a good fit; 0.95 = superior fit
RMSEA	When the Root mean square error of approximation (RMSEA) was < .05 the fit was good. When RMSEA was < .08 there was a reasonable fit. When the RMSEA was greater that .08 but smaller that .10 there was a mediocre fit. When the RMSEA was greater than .10 there was a poor fit.
Hoelter's Index	An index score in excess of 200 was indicative of a model that adequately represented the sample data.

Note. The values listed above were based on recommendations from Kline (1998) and Byrne (2001) on path analysis and structural equation modeling. The .05 level of significance was used for all research hypotheses.

Chapter 4

RESULTS

Recall that the purpose of this study was to apply the SEM model to an athletic setting and to investigate the role of performance and relevance on closeness of individual friendships and team cohesion. The statistical analyses of these data are presented in this chapter. This chapter consists of the following sections: (a) descriptive statistics, (b) psychometrics of the GEQ, (c) path analyses of friendship choice and the SEM model, (d) path analyses of cohesion and the SEM model, and (e) summary.

Descriptive Statistics

The participants in this study were male undergraduates ($N = 38$) representing six different universities. The participants averaged 21 years of age ($SD = 1.81$) with 7 years ($SD = 2.46$) of competitive golf experience. Table 2 presents the means and standard deviations for each primary variable tested in the model. The matrix presenting the correlations between closeness ratings, performance, relevance, self-esteem and the four sub-scales of the GEQ (GI-S, GI-T, ATG-S, and ATG-T) can be found in Table 3.

In comparison to other important categories, it was found that golf was relevant to the majority of the participants. Ratings of relevance of golf ranged from 0 to 100 ($M = 73.29$, $SD = 27.97$; see Figure 2). As can be seen from Table 2 and Figure 2, it is clear that there is a highly skewed distribution and that relevance scores clustered in the higher ranges.

Table 2

Descriptive Statistics for Closeness Ratings, Performance Differences, Relevance, Self-Esteem and Cohesion (GI-S, GI-T, ATG-S, and ATG-T)

	M	*SD*	*Min*	*Max*	*N*
Closeness Rating	67.23	25.74	0	100	97
Performance Differences	0.15	2.98	-9	10	97
Relevance	73.29	27.97	0	100	38
Self-Esteem	35.43	2.64	30	40	38
GI-S	23.29	7.49	8	36	38
GI-T	30.89	5.89	18	45	38
ATG-S	32.23	7.03	11	43	38
ATG-T	25.81	5.66	16	35	38

Note. There were 38 participants in this study. $N = 97$ was obtained by comparing each of the participants performance difference and closeness to six other participants on the team.

Table 3

Correlations Between Closeness Ratings, Performance, Relevance, Self-Esteem and the Four Sub-Scales of Cohesion (GI-S, GI-T, ATG-S, and ATG-T)

Variables	1	2	3	4	5	6	7	8
1. Closeness Ratings	-							
2. Performance	.25*	-						
3. Relevance	.06	-.03	-					
4. Self-Esteem	.07	.22*	-.35*	-				
5. GI-S	.27*	.16	.26*	-.23*	-			
6. ATG-T	.02	-.03	-.24*	.26*	-.30**	-		
7. ATG-S	.32*	.13	.28**	-.46**	.62**	-.11	-	
8. GI-T	.13	.10	.03	.31**	.19**	.48**	.18	-

Note: $*p < .05$. $**p < .01$.

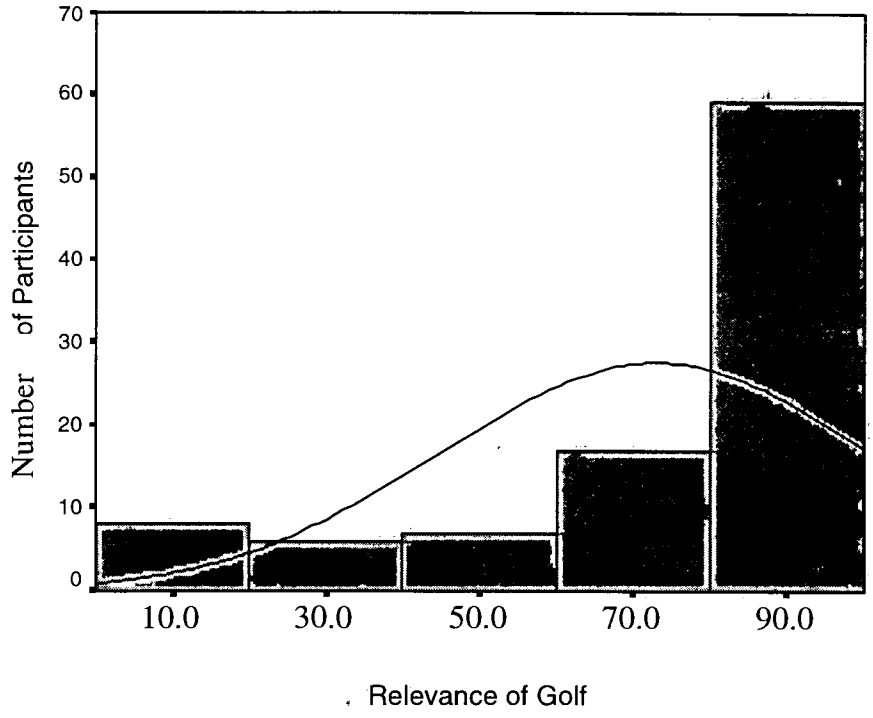


Figure 2. This figure represents a histogram distribution of relevance of golf ($N = 38$). The mean is 73.29 with a standard deviation of 27.97. The line represents a normal curve. Relevance was measured by having the participants' list how relevant golf was to how they defined themselves on a scale from zero (no relevance) to 100 (highest relevance) in comparison to 12 other categories. Golf relevance was then determined by the following calculation:

$$\frac{\text{Golf relevance rating - lowest relevance rating}}{\text{Highest relevance rating - lowest relevance rating}}$$

Self-esteem scores ranged from 30 to 40 (M = 35.43, SD = 2.64; see Figure 3). These scores clustered in the higher ranges, and 76% of the sample scored above 35. Scores below 31 indicate low self-esteem, whereas scores above 35 indicate high self-esteem. Dr. A. Story (personal communication, July 25, 2002).

Psychometrics of the Group Environment Questionnaire

Reliability analyses were conducted on each of the four sub-scales associated with the GEQ. The results indicated that the alpha reliability coefficients for the GI-S, GI-T, and ATG-T were .81, .70, and .99, respectively (see Table 4, line D). The alpha reliability coefficient for ATG-S, however, was only .19. Item total statistics indicated that the deletion of Item #7 ("I enjoy other parties more than team parties") produced a substantial increase in reliability. The alpha coefficient with the deletion of Item #7 was .73. Therefore, subsequent analyses conducted on ATG-S used an ATG-S sub-scale created without Item #7.

Path Analyses

Path analyses were used to explore the extent to which the hypothesized models adequately described the sample data (Byrne, 2001). Guided by Tesser's (1988) SEM model (see Figure 1), six models were constructed using the statistical software AMOS 4.01 (SPSS Corp., Chicago, IL) and SPSS 11.0 (SPSS Inc., Chicago, IL).

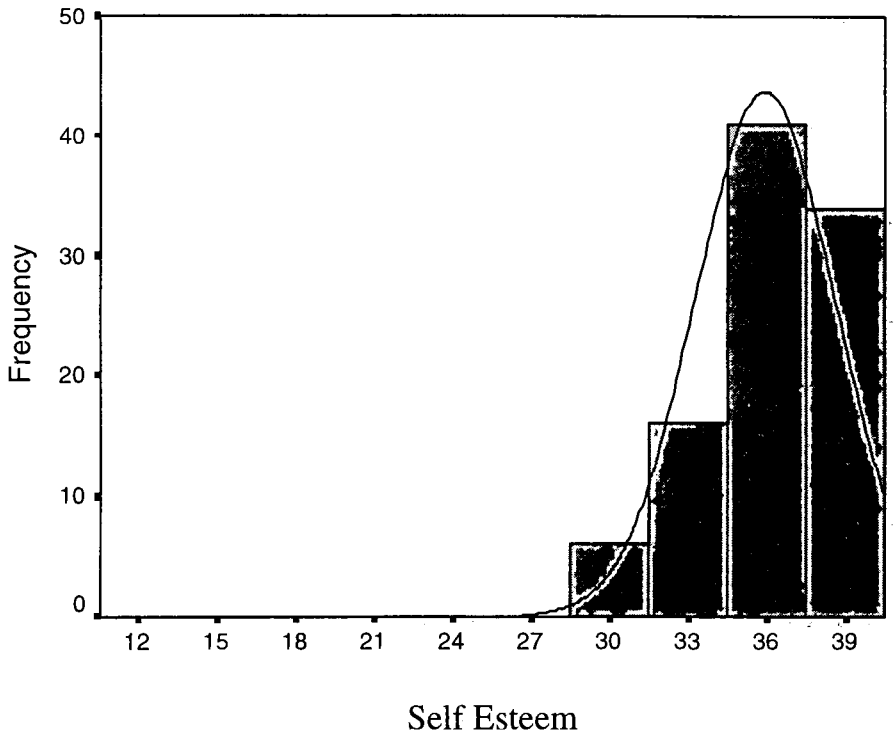


Figure 3. This histogram represents the participants' ($N = 38$) self-esteem ($M = 34.43$, $SD = 2.64$) as measured by Rosenberg's (1965) Self-Esteem Scale. The line represents the normal curve. The possible range of scores was from 10 to 40. The higher the sum of these scores, the higher was the individual's self-esteem.

Table 4

Alpha Reliability of the Four Sub-Scales (ATG-S, ATG-T, GI-S, and GI-T) of the Group Environment Questionnaire

	ATG-S	ATG-T	GI-S	GI-T
A. Widmeyer, Brawley, & Carron (1985)	.64	.75	.76	.70
B. Carron & Spink (1995; Study 1)	.62	.77	.77	.71
C. Carron & Spink (1995; Study 2)	.61	.78	.78	.71
D. Wahlin, DePalma, & Wigglesworth (2003)	.19*	.99	.81	.70

Note. *Indicates the alpha reliability prior to deletion of item #7. The alpha coefficient with the deletion of Item #7 was .73.

Model 1: The Self-Evaluation Maintenance Model

The first theoretical model was constructed based on Tesser's (1988) SEM model. This model proposed that relevance of the activity and participant performance differences would differentially affect how close a friend the participant would rate his teammate.

The model fit statistics showed a closeness of fit between the hypothesized model and the sample data (see Table 5). The Chi-Square value, the Goodness of Fit Index, the Comparative Fit Index, Hoelter's Critical N and the Root Mean Square Error of Approximation were all strongly indicative of a superior model fit between the hypothesized model and the sample data. Based on the Modification Index, no significant changes were suggested for the factor loadings and there was no rationale for further respecification of the model.

The adequacy of each of these three variables (relevance, performance difference, and closeness) was then evaluated (see Figure 4). Based on the critical values and explained variances it was noted that the path between relevance and performance difference was not significant. The path between performance difference and closeness ratings was significant; however, it accounted for only 6% of the variance in closeness. Thus, Model 1 indicated that the golfers in this experiment tended to be closer friends with teammates who performed better, and more distant to teammates who performed worse. However, the level of explained variance was very low (6%) indicating that the model was not exhaustive and a second model was constructed (Model 2).

Table 5

Model Fit Statistics

Model Description	χ^2	*df*	*p*	χ^2 / *df*	GFI	CFI	RMSEA	Hoelter .05
1. SEM (Figure 4)	.43	1	.52	.43	1.00	1.00	.00	869
2. SEM + Self-Esteem (Figure 5)	5.55	3	.14	1.85	.97	.86	.09	136
3. SEM Identified (Figure 6)	.30	1	.58	.30	1.00	1.00	.00	1225
4. Cohesion (Figure 7)	14.24	4	.01**	3.56	.96	.90	.16	64
5. Cohesion + Self-Esteem (Figure 8)	63.77	9	.00**	7.09	.87	.65	.25	26
6. Cohesion Identified (Figure 9)	11.89	7	.10	1.70	.97	.97	.09	114

Note. SEM, Self-Evaluation Maintenance Model; GFI, Goodness of Fit Index; CFI Comparative Fit Index; RMSEA, Root-Mean Square Error of Approximation
*$p < .05$. ** $p < .01$.

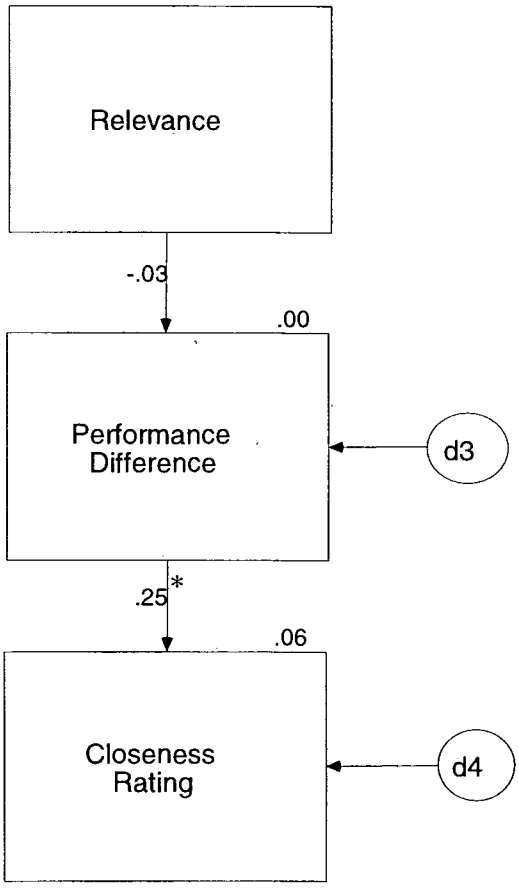


Figure 4. Model 1 based on Tesser's (1988) Self Evaluation Maintenance model. This model represents relevance of the task, performance difference, and closeness ratings of individual friendship. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well. This model was accepted based on Model Fit Statistics. * Represents significant paths $p <. 05$; ** represents significant paths $p <. 01$. d represents disturbances.

Model 2: Self-Evaluation Maintenance Model and Self-Esteem

Based on research on the SEM model and the role of self-esteem (Tesser & Moore, 1989; Tesser et al., 2000), a second model was constructed with self-esteem specified as the exogenous variable (see Figure 5). The model fit statistics showed a closeness of fit between the hypothesized model and the sample data (see Table 5). The non-significant Chi-Square value indicated that there was a closeness of fit with the model overall. Despite the initial acceptance of this model, the CFI, the RMSEA, the Hoelter's Critical N were indicative of only a mediocre model. In addition, the modification indices suggested several alterations. Thus, Model 3 was developed.

Model 3: Self-Evaluation Maintenance Model Identified

Based on the modification indices produced in the analysis of the model in Figure 5, a third model was constructed (see Figure 6). Model fit statistics indicated that there was good closeness of fit between the hypothesized model and the sample data. As can be seen in Table 5, the non-significant chi-square value indicated that the overall fit of this over-identified model was acceptable. Likewise, the χ^2 / *df* ratio, Goodness of Fit Index, the Comparative Fit Index, Hoelter's Critical N and the Root Mean Square Error of Approximation were strongly indicative of a superior fit between the hypothesized model and the sample data (see Table 5). Based on the Modification Index, no significant changes were suggested for the factor loadings and there was no rationale for further respecification of the model. Therefore, it was concluded that the overall model fit statistics were acceptable for identifying the path between self-esteem, relevance, performance difference, and closeness ratings.

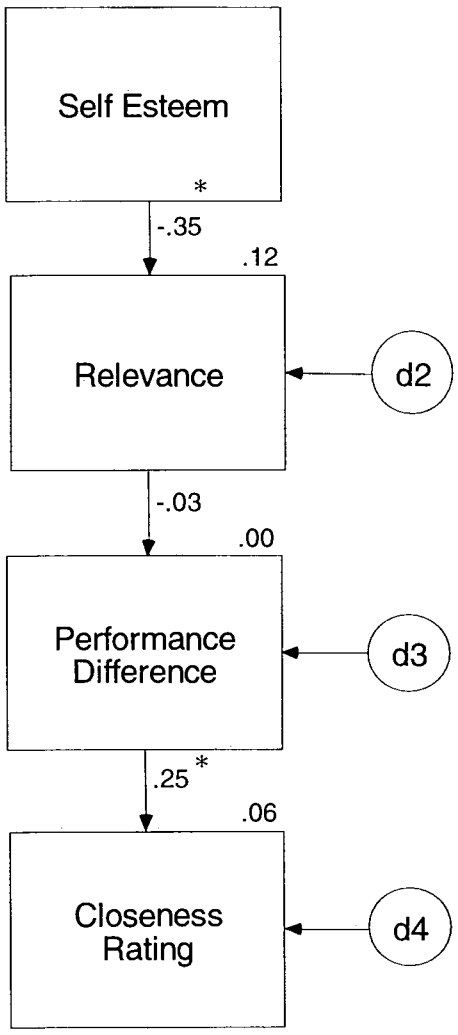


Figure 5. Model 2 was based on Model 1 (Figure 4). Self-esteem was added to the model based on the importance of self-esteem in the self-evaluation maintenance literature (Tesser & Moore, 1989; Tesser et al., 2000). Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well. This model was rejected based on poor Model Fit Statistics.
* Represents significant paths $p < .05$; ** represents significant paths $p < .01$.
d represents disturbances.

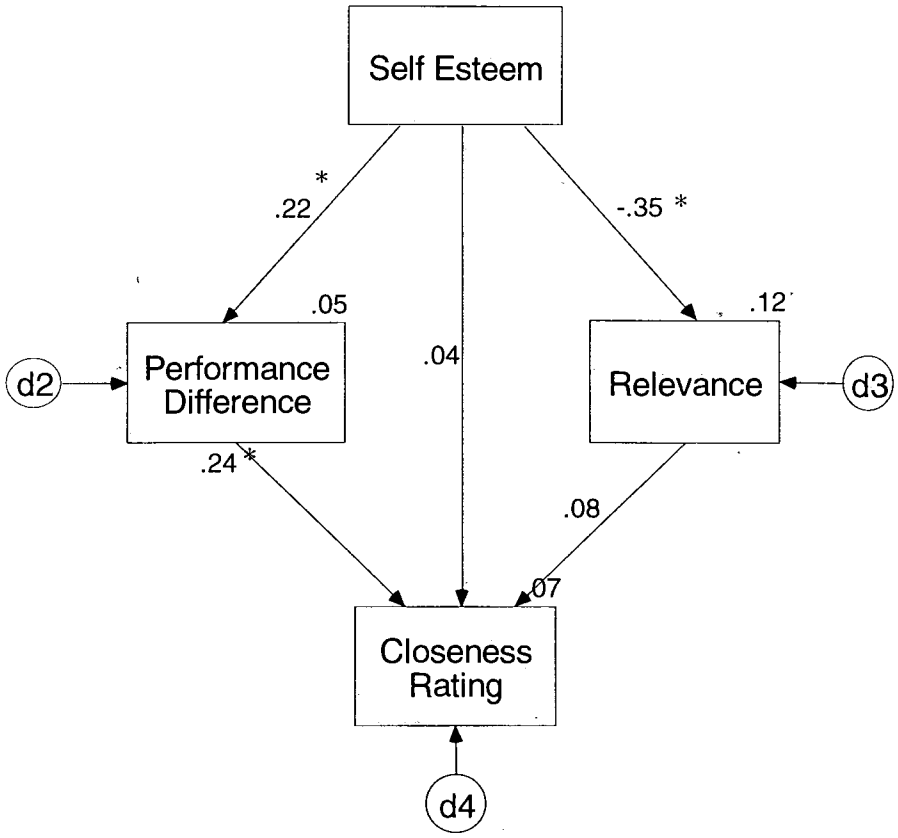


Figure 6. Model 3 was based on modification indices relating to Figure 5 (Model 2) and Tesser's (1988) SEM model including self-esteem. This model was accepted because of good model fit statistics. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well. * Represents significant paths $p <$ .05; ** represents significant paths $p < .01$. d represents disturbances.

The adequacy of each of the four variables (self-esteem, relevance, performance difference, and closeness) was evaluated. Based on the critical values and explained variances, several paths were identified as being significant (see Figure 6). This modified model suggested that the indirect path between self-esteem, performance and closeness was very important. The interpretation of these paths indicated that the higher the participant's self-esteem, the more likely the participant was to surround himself with teammates who were better golfers. In addition, a person with a higher self-esteem was less likely to define himself in terms of golf. The results highlighted the importance of self-esteem and its role in forming individual friendships in a competitive sport environment.

Model 4: Cohesion

The first three models were based on Tesser's (1988) SEM model and indicated that self-esteem and performance differences did impact whom the participant chose as friends. In order to approximate the SEM model in an athletic context with an accepted measure of cohesion (Group Environment Questionnaire), a model was constructed with the same performance and relevance variables as in the previous analyses (see Figure 7). Cohesion was measured as a construct of GI-S, GI-T, ATG-S, and ATG-T. The analysis showed that the participants primarily perceived the team to be a cohesive unit surrounding the task of playing golf (see Figure 7). In the initial analysis of relevance, performance and cohesion, however, no significant paths were found and the model fit statistics indicated that this model was an inadequate fit of the sample data (see Table 5). Thus, this model was disregarded and a new model (Model 5) was subsequently constructed with self-esteem as the observed exogenous variable.

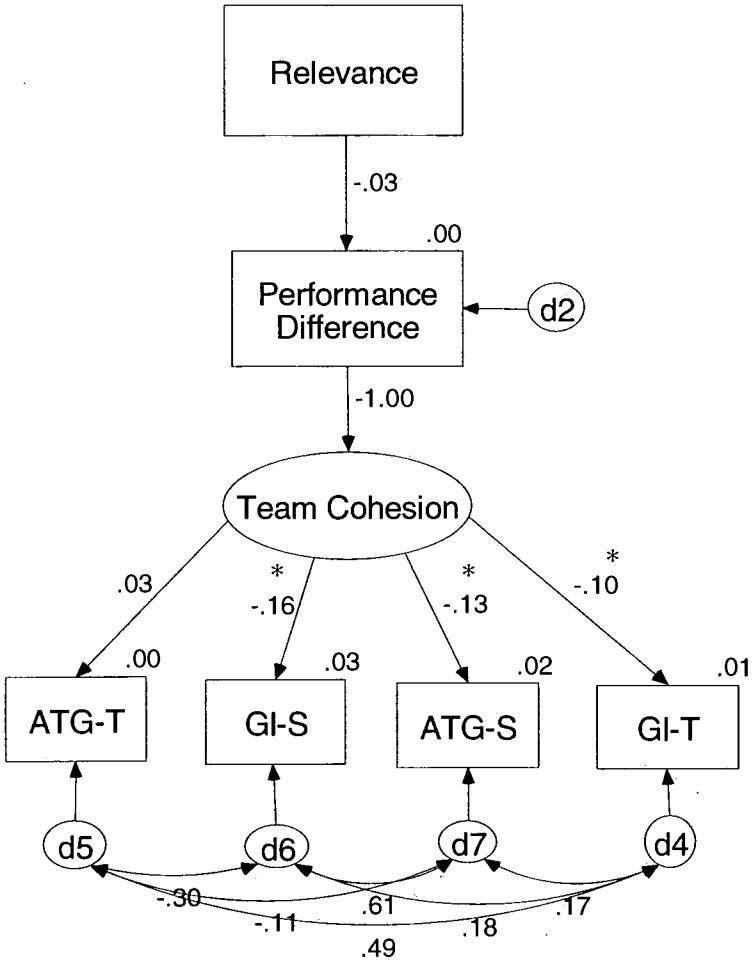


Figure 7. Model 4 was based on Tesser's (1988) SEM model using the four sub-scales of the Group Environment Questionnaire (ATG-T, GI-S, ATG-S and GI-T) as a construct of cohesion. This model was rejected because of poor model fit statistics. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well.

* Represents significant paths $p < .05$; ** represents significant paths $p < .01$.

d represents disturbances.

Model 5: Cohesion and Self-Esteem

To test the SEM model in an athletic context, self-esteem was added to the model (see Figure 8). The model fit statistics showed an inadequate closeness of fit between the hypothesized model and the sample data (see Table 5). The significant Chi-Square value, the GFI, the CFI, the RMSEA, and the Hoelter's Critical N were all indicative of a poor model. Based on the Modification Index, however, significant changes were suggested and there was rationale for further respecification of the model (see Table 5).

Model 6: Cohesion Identified

Based on the modification indices from the previous model, a new model was constructed (see Figure 9). The model fit statistics showed a good closeness of fit between the hypothesized model and the sample data (see Table 5). The non-significant Chi-Square value, the GFI, the CFI, and the RMSEA were all indicative of a good model. Based on the Modification Index no other significant changes were suggested for the factor loadings and there was no rationale for further respecification of the model. This model fit the data moderately well. The adequacy for each of the four variables (self-esteem, relevance, performance difference, and cohesion) was evaluated. Based on the critical values and explained variances, several significant observations were made (see Figure 9).

Model 6 indicated that a golfer with higher self-esteem would be less likely to define himself in terms of golf. The paths also showed that there was no significant effect observed between relevance of golf and perceptions of team cohesion. The direct path between self-esteem and cohesion indicated that a person with higher self-esteem

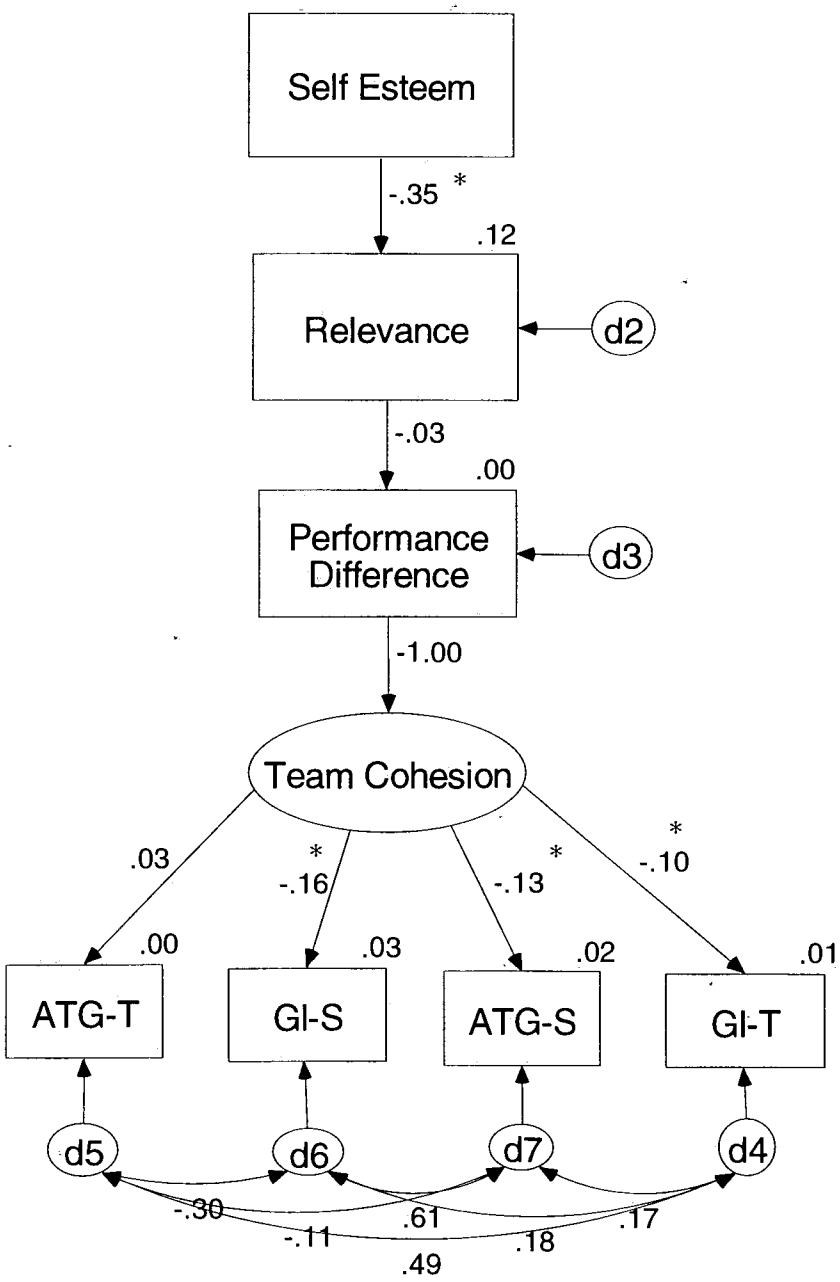


Figure 8. Hypothesized Model 5 for Cohesion and Self-Esteem. This model was rejected due to poor model fit statistics. * Represents significant paths $p < .05$; ** represents significant paths $p < .01$. d represents disturbances. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well.

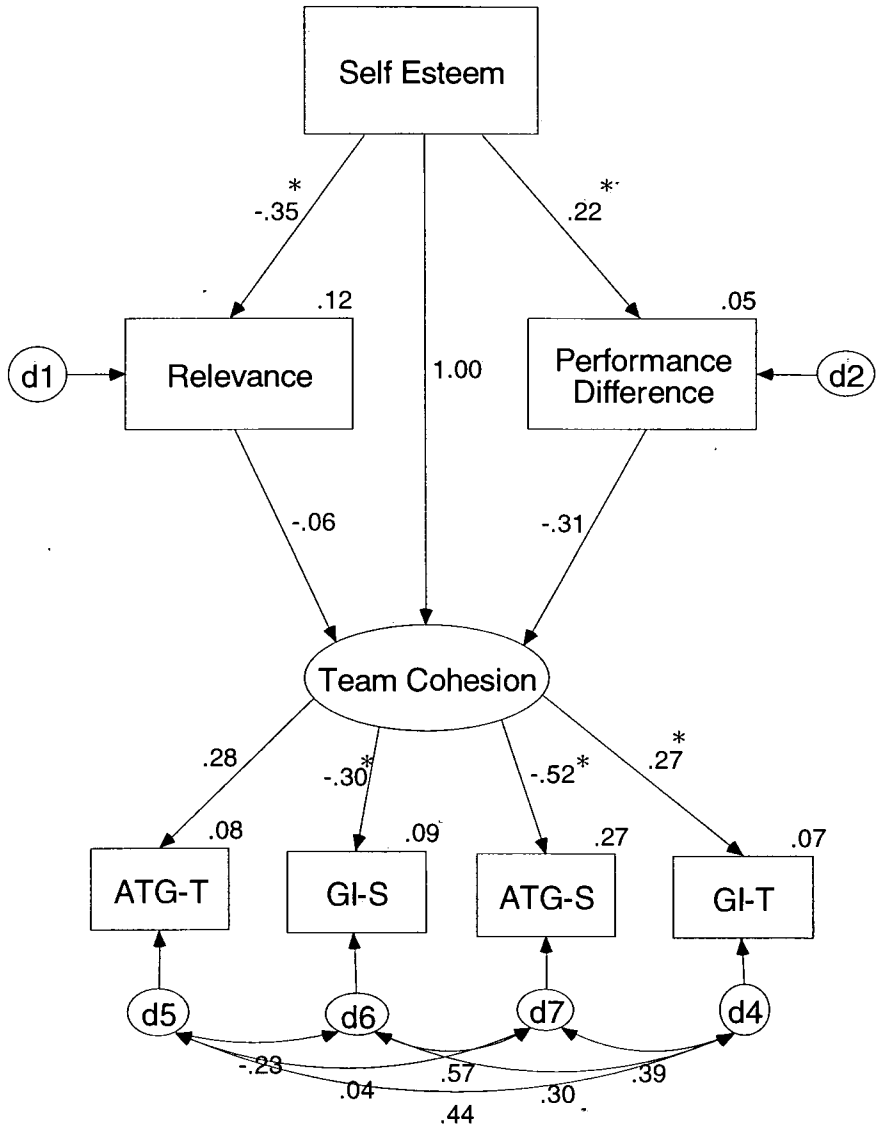


Figure 9. Model 6 for Cohesion and Self-Esteem. This model was accepted based on model fit statistics. Note that a negative performance difference indicated that the participant outperformed his friend while a positive performance difference indicated that the friend outperformed the participant. A performance difference of zero indicated that the participant and his friend played golf equally well. * Represents significant paths $p <$ .05; ** represents significant paths $p < .01$. d represents disturbances.

was more likely to perceive the team to be high in task cohesion. As previously indicated, the interpretation of this particular model should be restricted to participants with higher self-esteem. An interpretation of the effect on individuals with low self-esteem would violate the assumptions of structural equation modeling with respect to this particular data.

The indirect effect between self-esteem and cohesion, however, showed that the perception of cohesion might be related to differences in performance between teammates. The indirect path between self-esteem and cohesion was marginally significant and indicated that a golfer with higher self-esteem would be more likely to surround himself with people who were better golfers. Figure 9 also indicated that team cohesion in this sample was better defined by task cohesion than by social cohesion. In response to the hypothesis that task cohesion will be higher than social cohesion if the task was relevant, the results showed that there was no significant path between relevance and team cohesion.

Summary

The path analyses identified a consistent pattern in all six models. Three models related to the first hypothesis which stated that a golfer would choose to be friends with teammates of lesser golf ability if golf was relevant to how they defined themselves, but would not be as close to more successful golfers if they perceived golf to be relevant to how they defined themselves. The next three models were related to the second hypothesis that if relevance of golf was important to how the participant defined himself, the participant would be associated with the group for task reasons more than for social reasons.

In both hypotheses it was found that the path analyses revealed no support for the importance of relevance in determining how close the participant felt to his teammates. The results indicated that self-esteem, however, might be an overriding factor in who participant chose as friends. Interestingly, it was found that self-esteem was highly correlated with relevance as well as performance difference. Both the hypotheses were rejected due to the lack of support for relevance, but the basic assumption of the SEM model was preserved when self-esteem was added to the models.

Chapter 5

DISCUSSION

This chapter presents a discussion of both hypotheses in relation to previous research. A test of whether a golfer would choose to be friends with teammates of lesser golf ability if golf was relevant to how they defined themselves (Hypothesis 1) will be addressed first with consideration of the role of self-esteem.

Then the relationship between Tesser's (1988) SEM model and cohesion will be discussed in relation to Hypothesis 2: If golf was highly relevant to the participant, the participant would be associated with the group for primarily task rather than social reasons. Finally, the relation of these findings to future research and the contribution of the present thesis will be discussed.

Friendship Choice in an Athletic Context

The SEM model (Tesser, 1988) hypothesizes that a person will choose to be close to others who (1) do not out perform them on things that are relevant and thereby do not threaten them by comparison, but (2) do out perform them on things that are irrelevant so that they might bask in reflected glory.

The primary purpose of this study was to apply the SEM model to an athletic field setting where less research has been conducted. In the present research, no variables were manipulated, but the measurements were a function of each individual's established perceptions of friendship and relevance, and a direct measure of their golf performance in comparison to that of their teammates.

Hypothesis 1

It was hypothesized that if golf was personally relevant, each golf team member would be more likely to choose to be friends with teammates who performed worse; but, if golf was irrelevant, they would be more likely to choose to be friends with teammates who performed better.

The results indicated that the participants in general felt closer friendships with better performing teammates. Path analyses revealed no support for the importance of relevance in determining how close the participant felt to his teammates. In light of previous findings which underscore the importance of relevance (Tesser & Paulhus, 1983; Tesser et al., 2000) it was surprising to find no significant relationship.

There are several potential reasons for the failure to find an effect of the importance of activity relevance. One reason could be that relevance was not measured properly. However, activity relevance in this research was measured in a similar fashion to other SEM studies where the importance of relevance was detected.

It is possible, of course, that there is no affect of activity relevance on closeness ratings. It is more likely, however, that the failure to detect an effect is because most of the sample believed that golf was highly relevant. These participants freely choose to engage and strive for success in golf. The activity is then, by definition, characterized as relevant (Tesser & Campbell, 1984). In a true test of the SEM model, what this sample was lacking was a critical mass of participants who believed that golf was irrelevant. Though relevance of the activity did not show the expected effect, the findings are still interpretable within the context of the SEM model. Consistent with hypothesis 1, those who felt golf was of lesser relevance to the way in which they defined themselves were

more likely to surround themselves with people who were better performers. This could possibly be explained by the participant's degree of self-esteem.

Self-Esteem

Another reason why relevance is still likely to be important is the significant negative correlation with self-esteem. In this sample, 76% of the participants were high in self-esteem with very few participants exhibiting low self-esteem. The results showed that those individuals who were higher in self-esteem chose to be closer friends with individuals who performed better, and reported that golf was less relevant to how they defined themselves personally. This pattern was consistent across all models.

How do we explain the overall pattern, then, that seems overtly inconsistent with the basic premise of the SEM model? With the addition of self-esteem to the model, results indicated that relevance was not without importance. Results indicated that a person with higher self-esteem was less likely to define himself in terms of golf and thus was able to surround himself with people who were better golfers. This is consistent with research by Wood et al. (1999) which indicated that a person with a higher self-esteem would not feel threatened by a better performing close other and therefore could be close despite relevance of the activity (see also Tesser & Moore, 1989; Tesser et al., 2000). Wood et al. (1999) found that a person who is high in self-esteem could seek comparison in strength areas rather than only in an area of weakness. Taken together, if golf is perceived as an area of strength, high self-esteem could explain why a person could seek to compare himself to a better performing other. Similarly, a laboratory study by Yinon et al. (1989) indicated that participants tended to interact more with a better performing

other when the performance reflected a dimension or an area in which they expected to reach excellence and when they hoped to learn from a better performing individual. In summary, a high self-esteem may offer some protection against the threat to self-evaluation, and allow an individual to compare oneself to a stronger performer in an area in which they hope to learn from the better performing individual (Tesser & Moore, 1989). As was seen across all models, when self-esteem was added, the results of the study consistently supported the underlying assumption of the SEM model that a person behaves to maintain a positive self-evaluation. Self-esteem was an important variable in predicting who the participant chose as friends. Future studies should continue to measure self-esteem when considering whether a person would choose to be closer to a better performing other and when they prefer to not to be as close.

The Performance-Cohesion Relationship

Another purpose of the study was to apply Tesser's model to the performance-cohesion relationship using the Group Environment Questionnaire (GEQ; Carron et al., 1985), a commonly used measure of task and social cohesion.

Psychometrics of the Group Environment Questionnaire

Paskevich et al. (2001) suggested that more empirical data of the conceptual model of cohesion would be helpful to advance research in cohesion. Similarly, Carron et al. (2002) called for an understanding of the "why" behind the performance-cohesion relationship and specified the importance of distinguishing between social and task cohesion. As can be seen in Table 2, the reliability coefficients for ATG-T, GI-S and GI-T are universally acceptable across published work. However, consistent with even the work of Carron et al. (1985) we found that the reliability coefficient of the ATG-S

sub-scale was weaker than the remaining three sub-scales and appears to be the least reliable sub-scale. Simply by deleting Item #7 ("I enjoy other parties more than team parties") the alpha reliability coefficient for the ATG-S rose from .19 to .73. We recommend that future researchers using the GEQ investigate the reliability improvement of ATG-S associated with the deletion of Item #7.

Hypothesis 2

Initially, it was hypothesized that the SEM model might offer insight into discovering the mechanism behind the performance-cohesion relationship, and potentially identify why there were meaningful inconsistent results in the performance-cohesion literature. The existing research does not offer such an explanation and neither does it identify the precise causal relationship between cohesion and performance. Given the predictions of the SEM model, it was hypothesized that if relevance of the sport activity was high, the group would exhibit cohesion surrounding the task, rather than the social environment. This hypothesis was based purely on literature from the SEM model because research on relevance has not been conducted in an athletic setting, nor has it been connected to the cohesion literature. Data analysis, however, indicated that perceptions of cohesion were not related to relevance of golf or performance differences. Thus, the second hypothesis was also rejected.

Perceptions of cohesion were highly related to self-esteem. The direct path from self-esteem to team cohesion indicated that the higher the participants self-esteem the higher the sense of task cohesion. Theoretically, a person with a high self-esteem can focus on exceptional task performance with the group because a better performing other does not damage the perception of the self. No studies have been located that relate self-

esteem to cohesion and it is recommended that future research should investigate whether athletes high in self-esteem are less likely to feel the need to establish friendships than are athletes who are low in self-esteem. Thus, an individual would be less likely to require feeling integrated and attracted to the team for social reasons, and could focus attention on exceptional task performance.

This research shows that higher self-esteem has a direct positive effect on perceptions of team cohesion. The higher an individual's self-esteem the higher the perception of task cohesion. This was an important facet of this research that does not appear in previous research. If self-esteem indeed leads to a higher sense of task cohesion, and higher cohesion leads to increased performance, efforts to increase self-esteem may be one way to increase performance. While speculative, future research should investigate whether the increase in self-esteem will serve to increase performance.

Future Research

Future research should consider investigating the relationship between closeness, relevance, performance difference, and self-esteem. This research indicated that the higher the level of self-esteem, the higher were the closeness ratings given to a better performing teammate. Thus, the foundational aspects of the SEM model were preserved. Recommendations for future research would be to investigate in greater detail both the relationship between relevance and self-esteem and to test their effect on closeness and performance. Future research should also be sure to include participants with low as well as high self-esteem and use a larger number of participants. This study cannot effectively address the effect of low self-esteem on closeness because participants in this sample largely represented people with higher self-esteem. To extrapolate these findings to

individuals with low self-esteem would violate the assumptions of structural equation modeling. Future research should also investigate how cohesion is related to self-esteem and affected by a better performing teammate. To do so may advance the identification of the mechanism behind the performance-cohesion relationship.

Importance of the Present Findings

The contribution of the present research is in elucidating the role of self-esteem in both individual friendship choices and cohesion. The SEM model is conceptually applicable to the athletic venue, but to date has not been applied in this context. Thus, this research provides an excellent example of applying this theory outside of the laboratory and with athletes.

Secondly, future researchers investigating task and social cohesion could benefit from deleting item #7 from the GEQ to gain more consistent results when using the Group Environment Questionnaire. This may also aid future researchers in their attempt to understand the performance-cohesion relationship.

Finally, the importance of introducing a highly tested social psychological model into the literature of sport psychology should not be undervalued. This research functions as a bridge between two fields of psychological inquiry. Future research should continue to introduce other models from social psychology into the athletic venue.

Chapter 6

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Research on self-evaluation is complex but plentiful. For decades researchers have investigated the SEM model which hypothesized how people choose to interact with one another based on closeness; activity relevance and personal task performance. This study could be characterized as one of the many, yet there are certain features that make it unique. It is unique in terms of applying the SEM model to an athletic context where performance is of utmost import. The athletic venue represents a real world setting where the participants practice daily to maximize performance and where there is daily interaction with other teammates that are performing on precisely the same task as the participant. The results of this study show that in daily activities athletes behave to maintain a positive self-evaluation and that self-esteem is critically important to the process. The present study indicates that self-esteem might actually be an overriding factor in determining how close one will be to someone who is performing better on a relevant task.

The cohesion literature has identified an important need to understand how cohesion affects performance and how performance affects cohesion. Less than a year ago, Paskevich et al. (2001) called for an understanding of the mechanism behind the performance cohesion relationship. Carron et al. (2002) have just recently made it even more apparent that there is a need to understand how performance affects cohesion and vice versa. They recommended that research should address the " why" and "how" of the performance-cohesion relationship, taking a particular look at two aspects of

cohesion: task and social cohesion. Because some research indicates that the performance-cohesion relationship is positive, and other research indicates that the relationship is negative, researchers are unclear as to precisely when performance increases are going to be beneficial to cohesion, and when in fact they might be detrimental. The present study represented an attempt to examine the performance-cohesion relationship from the theoretical standpoint of the SEM model.

Based on the results of this study, future research should investigate whether the inconsistent findings between cohesion and performance could be linked to an individual's level of self-esteem. Perhaps the level of self-esteem determines when it is reasonable to be closer friends with a better performing teammate and when it might be unreasonably damaging to one's positive sense of self. That is, in the present study, higher self-esteem was associated with the inclusion of higher performing individuals as one's closest friends, as well as with a concomitant increase in task cohesion. Self-esteem should be routinely assessed when investigating the performance-cohesion relationship. This research strongly supports the Carron et al. (2002) contention that the distinction between task and social cohesion is critically important. Research that fails to properly distinguish between task and social cohesion may be unable to detect the performance-cohesion relationship. Future research should indeed investigate more fully when cohesion leads to increased performance and whether self-esteem might function as a catalyst for such a relationship.

Conclusion

The SEM model was designed to make specific predictions about the relationship between friendship choice, performance, and relevance of a specific activity. It was anticipated that this study might serve as a bridge between social psychology and sport psychology by applying a well-supported social psychological theory to an athletic context. It was also anticipated that sport psychology research on cohesion and performance combined with social psychological research on friendship choice could offer important insights into discovering the mechanism behind the performance-cohesion relationship. Though the mechanism behind the performance-cohesion relationship remains elusive, the results of this study highlight that such an understanding of the performance-cohesion relationship may come with an understanding of the role of self-esteem.

Recommendations

Future studies on friendship choice and cohesion in an athletic context should incorporate self-esteem in the performance-cohesion relationship. In addition, we recommend that future researchers using the GEQ investigate the reliability improvement associated with the deletion of Item #7. But most importantly, future studies on friendship choice and cohesion should consider examining the performance-cohesion relationship as it relates to self-esteem. While the present study did not provide direct support for the importance of relevance, there was consistent support for the basic assumption of the SEM model that a person behaves to maintain or increase a positive self-evaluation.

REFERENCES

Blascovich, J., & Tomaka, J. (1991). Measures of self-esteem. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.) *Measures of personality and social psychological attitudes, Volume* I. San Diego, CA: Academic Press

Brawley, L. R., Carron, A. V., & Widmeyer, W. N. (1987). Assessing the cohesion of teams: Validity of the Group Environment Questionnaire. *Journal of Sport Psychology, 9*, 275-294.

Brawley, L. R., Carron, A. V., & Widmeyer, W. N. (1988). Exploring the relationship between cohesion and group resistance to disruption. *Journal of Sport Psychology, 10*, 199-213.

Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Carron, A. V., & Brawley, L. R. (2000). Cohesion: Conceptual and measurement issues. *Small Group Research, 31* (1), 89-106.

Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (1997). The measurement of cohesiveness in sport groups. In J.L. Duda (Ed.), *Advancements in sport and exercise psychology measurement.* Morgantown, WV, Fitness Information Technology.

Carron, A. V., Colman, M. M. Wheeler, J. & Stevens, D. (2002). Cohesion and performance in sport. *Journal of Sport & Exercise Psychology, 24*, 168-188.

Carron, A. V., Prapavesis, H., & Grove, J. R. (1994). Group effects and self-handicapping. *Journal of Sport & Exercise Psychology, 16*, 246-258.

Carron, A. V., Widmeyer, W. N., & Brawley, L. R. (1985). The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of Sport Psychology, 7*, 244-266.

Estabrooks, P. E., & Carron, A. V. (2000). The Physical Activity Environment Questionnaire: An instrument for the assessment of cohesion in exercise classes for older adults. *Group Dynamics*, *4*, 230-243.

Gibbons, F. X., Blanton, H., Gerrard, M. Buunk, B., & Eggleston, T. (2000). Does social comparison make a difference? Optimism as a moderator of the relation between comparison level and academic performance. *Personality and Social Psychology Bulletin*, *26*(5), 638-648.

Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: The Guilford Press.

Kulip, J. A., & Gump, B. B. (1997). Affective reactions to social comparison: The effects of relative performance and related attributes information about another person. *Personality and Social Psychology Bulletin*, *23*, 452-468.

NCAA sport-by-sport participation and sponsorship. (n.d.). Retrieved July 23, 2002, from http://www.ncaa.org/library/research/participation_rates/1982-2001/063-090.pdf

Matheson, H., Mathes, S., & Murray, M. (1997). The effect of winning and losing on female interactive and coactive team cohesion. *Journal of Sport Behavior*, *8*, 284-298.

McDonald, R. P., Ringo, H., & Moon, H (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7*(1), 64-82.

Ostrow, A. C., (Ed.). (1990). *Directory of psychological tests in the sport and exercise sciences.* Morgantown: Fitness Information Technology, Inc.

Paskevich, D. M, Estabrooks, P. A., Brawley, L. R., & Carron, A. V. (2001). Group cohesion in sport and exercise. R. N. Singer, H. A. Hausenblas & C. M. Janelle (Eds.), *Handbook of Sport Psychology*: Motivation (pp. 472-496). New York, NY: John Wiley & Sons, Inc.

Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology, 57*, 672-680.

Pilkington, C. J., Tesser, A., & Stephens, D. (1991). Complementary in romantic relationships: A self-evaluation maintenance perspective. *Journal of Social and Personal Relationships, 8*, 481-504.

Reeves, R. A., & Tesser, A. (1985). Self-evaluation maintenance in sport team rivalries. *Bulletin of the Psychonomic Society, 23*(4), 329-331.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Rudich, E. A., & Vallacher, R. R. (1999). To belong or to self-enhance? Motivational bases for choosing interaction partners. *Personality and Social Psychological Bulletin, 25*(11), 1387-1404.

Schmitt, M. T., Silvia, P. J., & Branscombe, N. R. (2000). The intersection of self-evaluation maintenance and social and identity theories: Intragroup judgment in interpersonal and intragroup contexts. *Personality and Social Psychological Bulletin, 26*(12), 1598-1606.

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. *Advances in Experimental Social Psychology, 21*, 181-226.

Tesser, A. (2000). On the confluence of self-esteem maintenance mechanisms. *Personality and Social Psychology Review, 4*(4), 290-299.

Tesser, A., Campbell, J., & Smith, M. (1984). Friendship choice and performance: Self-evaluation maintenance in children. *Journal of Personality and Social Psychology, 46*(3), 561-574.

Tesser, A., & Cornell, D. P. (1991). On the confluence of self processes. *Journal of Behavioral Social Psychology, 27*, 501-526.

Tesser, A., Crepaz, N., Collins, J. C., Cornell, D., & Beach, S. R. H. (2000). Confluence of self-esteem regulation mechanisms: On integrating the self-zoo. *Personality and Social Psychology Bulletin, 26*(12), 1476-1489.

Tesser, A., & Moore, J. (1989). Independent threats to self-evaluation maintenance processes. *The Journal of Social Psychology, 130*(5), 677-691.

Tesser, A., & Paulhus, D. (1983). The definition of self: Private and public self-evaluation management strategies. *Journal of Personality and Social Psychology, 44*(4), 672-682.

Wahlin, C, DePalma, MT & Wigglesworth, J. (2003, March). *The effect of self-evaluation maintenance on friendship choices and cohesion in sport.* Paper presented at the Annual Meeting of the Eastern Psychological Association, Baltimore, MD.

Wann, D. L. (1997). *Sport psychology: Motivation in sport.* Upper Saddle River, NJ: Premtice Hall.

Weinberg, R. S., & Gould, D. (1995). *Foundations of sport and exercise psychology: Understanding group processes* (2nd ed.). Champaign, IL: Human Kinetics.

Widmeyer, W. H., Carron, A. V., & Brawley, L. R. (1993). The cohesion-performance outcome relationship with teams as the unit of analysis. *Journal of Sport and Exercise Psychology, 15*, S90.

Williams, J. M., & Widmeyer, W. N. (1991). The performance-cohesion outcome relationship in a coacting sport. *Journal of Sport & Exercise Psychology, 13,* 364-371

Wood, J. V., Giordano-Beech, M., & Ducharme, M. J. (1999). Compensating for failure through social comparison. *Personality and Social Psychological Bulletin, 25(11)*, 1370-1386.

Yinon, Y., Bizman, A., & Yagil, D. (1989). Self-evaluation maintenance and the motivation to interact. *Journal of Social and Personality Relationships, 6*, 475-486.

Appendix A

LETTER TO COACHES

Dear Golf Coach:

Thank you for your willingness to participate in my study. Not only will your participation help me to finish my requirements for my Master's Degree in Exercise and Sport Sciences at Ithaca College, but it may also add important knowledge to the current literature in sport psychology. So far, few researchers have taken the opportunity to test cohesion on individual sports such as golf.

I have enclosed 10 questionnaires and a self-addressed stamped envelope. I am interested in getting responses from your entire team not only the traveling team.

I have included a testing package that requires no explanation from you. All you need to do is:

- Read and sign the enclosed informed consent form for coaches.
- Hand out the package and ask your athletes to return it once they have completed it.
- When your athletes hand back the testing package, please provide each athlete with the debriefing statement that is also enclosed in the envelope.
- When you have received all of your athletes' information, I would be grateful if you could return it as soon as possible in the self addressed stamped envelope.

If you need any further information, please feel free to contact me. I very much appreciate your participation in this study.

Sincerely,

Charlotte Wahlin

111 West Clinton Street Apt 1, Ithaca, NY 14850
Phone: 607 275 0761, Email: Wahlin4@hotmail.com

Appendix B

INFORMED CONSENT FORM FOR COACHES

1. Purpose Of Study:

The purpose of this study is to examine friendship patterns on golf teams.

2. Benefits Of The Study:

For more than almost 5 decades researchers have been very interested in the effect that cohesion has on performance. You will get a glimpse of how research is conducted by some sport psychologists. The application of the information gleaned from this study could at some significantly later point be applied to your athletes' performances.

3. What You Will Be Asked To Do:

The study will require 30 minutes of your athletes' time. They will be asked to fill out 6 questionnaires regarding their friendship patterns and attitudes. It is important that they are as honest as possible in their evaluation of themselves and others.

4. Risks:

They will not experience any physical or psychological harm. In the unlikely event of physical or psychological harm subjects will be referred to the Counseling Center.

5. If You Would Like More Information About The Study:

Please contact: Charlotte Wahlin
Ithaca College
607-275-0761
wahlin4@hotmail.com

6. Withdrawal From The Study?

Your athletes are free to withdraw from the study at any time. If they choose not to continue the study, there will be no penalty or negative effect. In addition, they are free to refuse to answer questions on any part of this study.

7. How The Data Will Be Maintained In Confidence?

All data collected in the experiment will be held in complete confidence. This means that the data will be kept confidential, such that names will never be associated with particular data. After completion, the inventories will be assigned number codes so as to ensure further confidentiality. All of the questionnaires will remain confidential. The only people that will have access to this list are the principal investigators. All reporting of this information to outside parties will be done in group form. No names will **ever** be associated with this information in any disclosures.

8. I have read the above information and I understand its contents and I agree to participate in this study.

_____ _____

Print Name and Job Title Educational Institution

Signature Date

Appendix C
LETTER TO ATHLETES

Your Coach has agreed to participate in a study on friendship patterns on Golf teams. I hope you will take the time to participate and return the questionnaires to your coach as soon as possible, preferably within the next 24 hours.

For your voice to be heard and your data to be used it is very important that you read and sign the informed consent form on the first page.

The purpose of the study is to examine friendship patterns on golf teams. You will be asked to complete 6 short questionnaires. These questionnaires pose no physical or psychological risk and the task will likely take about 30 minutes. You are free to withdraw from the study at any time. If you choose not to continue the study there will be no penalty or negative effect. In addition, you are free to refuse to answer any questions on any part of this study.

Because we are studying friendship choices it is essential that you be as honest as possible. You must be 18 years of age or older to participate in this study. If you are under 18, we need to have your parents' approval. Your coach has approved this time for us to collect this data.

Again, when you answer the questions, **please** be as honest as possible and do not discuss your answers with any of your teammates or your Coach. If you have any questions or would like more information please feel free to contact me.

When you are finished,
PLEASE SEAL THE ENVELOPE AND RETURN IT TO YOUR COACH.

If you are ready to begin, turn to the next page of this testing package.

Thank you for your participation!

Sincerely,

Charlotte Wahlin

Graduate Student
Exercise and Sport Sciences
Ithaca College

Appendix D

INFORMED CONSENT FOR ATHLETES

1. Purpose Of Study:

The purpose of this study is to examine friendship patterns on golf teams.

2. Benefits Of The Study

For more than almost 5 decades researchers have been very interested in the effect that cohesion has on performance. You will get a glimpse of how research is conducted by some sport psychologists. The application of the information gleaned from this study could at some significantly later point be applied to your own performance.

3. What You Will Be Asked to Do:

The study will require 30 minutes of your time. You will be asked to fill out 6 questionnaires regarding your friendship patterns and attitudes. It is important that you are as honest as possible in your evaluation of yourself and others.

4. Risks

You will not experience any physical or psychological harm. In the unlikely event of physical or psychological harm subjects will be referred to the Counseling Center.

5. If You Would Like More Information About The Study:

Please contact: Charlotte Wahlin
Ithaca College
607-275-0761
wahlin4@hotmail.com

6. Withdrawal From The Study?

You are free to withdraw from the study at any time. If you choose not to continue the study, there will be no penalty or negative effect. In addition, you are free to refuse to answer questions on any part of this study.

7. How The Data Will Be Maintained In Confidence?

All data collected in the experiment will be held in complete confidence. This means that the data will be kept confidential, such that names will never be associated with particular data. After completion, the inventories will be assigned number codes so as to ensure further confidentiality. All of the questionnaires will remain confidential. Neither your coach nor your teammates will gain access to these data. The only people that will have access to this data are the principal investigators. All reporting of this information to outside parties will be done in group form. You and your name will **never** be associated with this information in any disclosures.

8. I have read the above information and I understand its contents and I agree to participate in this study. I acknowledge that I am of 18 years of age or older. If I am not 18 years of age or older, my parents signature has been obtained below.

_____ _____

Athlete Signature **Parent Signature (If athlete is under 18 years of age)**

_____ _____

Print Name Date

Appendix E

COVER PAGE

Birthday:____/____/_____

Please circle: Male

Female

Please circle:

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Other: Please Specify:_____

Number of years of playing golf competitively:_____Years

Briefly describe how you would compare your level of golf skills to your teammates:

_____

_____

_____

Please provide the name of your Educational Institution:_____

Appendix F

THE GROUP ENVIRONMENT QUESTIONNAIRE

Carron et al. (1985)

This questionnaire is designed to assess your perceptions of your athletic team. There are no right or wrong answers so please give your immediate reaction. Some of the questions may seem repetitive but please answer ALL questions. Your candid responses are very important to us. Your responses will be kept in strict confidence. Neither your coach nor anyone other than the researcher will see your responses.

The following questions are designed to assess your feelings about **YOUR PERSONAL INVOLVEMENT** with this team. Please **CIRCLE** a number from 1 to 9 to indicate your level of agreement with each of the statements.

1. I do not enjoy being a part of the social activities of this team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

2. I am not happy with the amount of playing time I get.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

3. I am not going to miss the members of this team when the season ends.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

4. I am unhappy with my team's level of desire to win.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

5. Some of my best friends are on this team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

6. This team does not give me enough opportunities to improve my personal performance.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

7. I enjoy other parties more than team parties.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

8. I do not like the style of play on this team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

9. For me, this team is one of the most important social groups to which I belong.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

The following questions are designed to assess your perceptions of **YOUR TEAM AS A WHOLE.** Please CIRCLE a number from 1 to 9 that best indicates your level of agreement with each of the statements.

10. Our team is united in trying to reach its goals for performance.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

11. Members of our team would rather go out on their own than get together as a team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

12. We all take responsibility for any loss or poor performance by our team.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

13. Our team members rarely party together.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

14. Our team members have conflicting aspirations for the team's performance.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

15. Our team would like to spend time together in the off-season.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

17. Members of our team do not stick together outside of practices and games.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

18. Members of our team do not communicate freely about each athlete's responsibilities during competition or practice.

1	2	3	4	5	6	7	8	9
Strongly Disagree								**Strongly Agree**

Appendix G

RELEVANCE

Please rate the following categories on the scale below on how important they are in your life. The category with the highest relevance in your life should receive the highest rating. **That is, the categories with the highest ratings will be those that are most closely related to the way in which you define your self.** Please continue until all categories have been rated. You may use any number between 0 and 100.

How important is each category is in you life?

0 No Relevance | **50** Moderate Relevance | **100** Highest Relevance

Academics_____	Adventure_____	Career_____
Family_____	Friends_____	Golf_____
Happiness_____	Religion_____	Respect_____
Sleep_____	Success_____	Values/Morals_____
Wealth_____		

Importance:

1. Please circle the number corresponding to how important golf is to you:

1	2	3	4	5
Not important				Highly Important

Priority:

2. Please circle the number corresponding to the priority that golf has in your life:

1	2	3	4	5
Not a priority				High Priority

Commitment:

3. Please circle the number corresponding to how committed you are to playing golf:

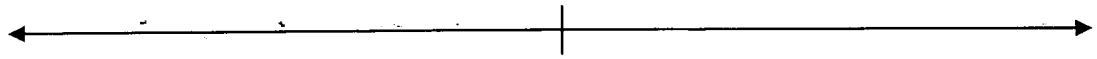
1	2	3	4	5
Not committed				Highly committed

Appendix H

CLOSENESS

Please rate your fellow teammates on a scale from 0 to 100 according to how **much you like them** or like to spend time with them. You may use any number between 0 and 100 to represent the closeness of your friendship. It is understandable that you may consider all of your teammates your friends. By placing an individual lower you are not necessarily expressing dislike for that person. It is natural and inevitable that you are friendlier with some people than with others. We are interested in an overall pattern for the team rather than for any particular friendship. Individual names will be removed and no names will ever accompany results of this study.

Please provide the name of your teammate and rate the closeness of your friendship on a scale from 0-100.



0 **50** **100**

Not close at all **Somewhat close** **Very close**

My closest friend on the team is (name): _____

(Friendship rating):_____

My second closest friend on the team is (name): _____

(Friendship rating):_____

My third closest friend on the team is (name): _____

(Friendship rating):_____

The teammate I feel **most distant** from is (name):_____

(Friendship rating):_____

The second teammate I feel **most distant** from is (name):_____

(Friendship rating):_____

The third teammate I feel **most distant** from is (name):_____

(Friendship rating):_____

Please explain what makes someone a close friend:_____

_____

_____

_____

_____

Appendix I

PERFORMANCE

Please provide the name of the top 3 overall best golf players on your team. If you feel you belong in the top 3 provide your name. Be honest. Then rate your teammates' level of performance. Use the scale below from 0-100 to represent how good of a golf player you think each person is. A score of 0 represents poor performer and 100 represents a very good performer. Finally, rate yourself on how good a golf player you feel you are. You can use **any number between 0-100** to illustrate level of performance.

0
Poor Performer

50
Average Performer

100
Very Good Performer

0 = Poor Performer 50 = Average Performer 100 = Very Good Performer

The **best** golf player on the team is (name):_____(performance rating):_____

The **second best** golf player on the team is (name): _____(performance rating):_____

The **third best** golf player on the team is (name): _____(performance rating):_____

The **worst** golf player on the team is (name): _____(performance rating):_____

The **second worst** golf player on the team is (name): _____(performance rating):_____

The **third worst** golf player on the team is (name): _____(performance rating):_____

Please rate **your** performance on the scale from 0 – 100_____

Appendix J

ROSENBERG'S SELF-ESTEEM SCALE (1965)

Please answer the following questions using the response scale provided. Read the response scales below very carefully. Please circle the right answer.

1. I feel that I'm a person of worth, at least on an equal plane with others.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

2. I feel that I have a number of good qualities.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

3. All in all, I am inclined to feel that I am failure.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

4. I am able to do things as well as most other people.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

5. I feel I do not have much to be proud of.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

6. I take a positive attitude toward myself.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

7. On the whole, I am satisfied with myself.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

8. I wish I could have more respect for myself.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

9. I certainly feel useless at times.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

10. At times, I think that I am no good at all.

1	2	3	4
Strongly agree	*Agree*	*Disagree*	*Strongly Disagree*

Appendix K

DEBRIEFING STATEMENT

Within the field of sport psychology, there has been a great deal of interest in the relationship between team cohesion and athletic performance. Research indicates that as performance increases, cohesion seems to increase. Likewise, as cohesion increases so does performance. But research also indicates that sometimes increased athletic performance can interfere with team cohesion. It is possible that sport psychologists can draw on other disciplines to help explain both the primary cohesion-performance relationship and the conditions under which we would expect to find these negative relationships. Tesser (1988) developed the Self-Evaluation Maintenance (SEM) model with precisely these issues in mind. The SEM model makes specific predictions about the relationship between friendship choice and performance based upon the relevance of the activity. Consequently, the present research investigated the effect of activity relevance on your choice of friends in an athletic context.

For any further information please contact:

Charlotte Wahlin
Ithaca College
607- 275- 0761
wahlin4@hotmail.com

Appendix L

RECRUITING STATEMENT

Excuse me Sir,

May I speak with you for a minute? My name is Charlotte and I am a graduate student at Ithaca College. I am in the process of doing research on Golf teams and how friendship choices may eventually effect performance.

I am doing this research as a requirement for completing my thesis and I was wondering if you have few minutes to talk right now or if there would be a better time that I can catch you? This will only take a few minutes.

I am interested in handing out some questionnaires to your athletes that will take them about 25 minutes to complete. The questionnaires are about friendship, golf, and performance.

I have the Human Subjects Committee approval from Ithaca College and these questionnaires are not going to pose any harm to your athletes.

If you are interested, I can give the envelope to you right now. In the envelope, I have placed a letter to you and an informed consent form that you need to sign. Also, there are 10 envelopes with each testing package. What is required is for you to hand these testing packages out to all your athletes even to those not competing today and ask them to return them as soon as possible. When your athletes return with the testing package, it is essential that you give them a debriefing statement so that they know the details of the study in which they have participated. Once all members of your team have completed the testing packages, you need to mail them back to me in the self-addressed stamped envelope. In the letter that is in here, I have explained the procedure that I just told you and if you have any concerns or questions I would be more than willing to help you with that as well.

I thank you very much for participating in my study.

Good luck with the rest of the tournament.

Appendix M

WHAT MAKES SOMEONE A CLOSE FRIEND?

1. If they listen to you, hang out with them and are there when you need to talk
2. Someone that listens and cares. Be there when you need them (For tough times). Courteous. Doesn't talk behind your back.
3. Easy to get along with, similar interest
4. Nice, respects m, funny but knows when to be mature.
5. Someone you hang out with on a consistent basis.
6. Someone who you can turn to talk to when something is wrong. There are always there to listen.
7. Nothing
8. Always there in a problem and is nice and easy to get along with.
9. Someone you can have fun with and you know you can depend on then if you need someone.
10. Trust and respect for each other
11. One who is honest and respect you no matter the situation.
12. Commitment. Being there with them when you need it, (Fan tines?)
13. There for you; can trust him, has a good time with you.
14. Someone you have good time with, same interest, good sense of humor
15. A close friend supports you at all time. One who you have fun with and has similar interests.
16. They are there for me in my time of need.
17. Their ability to put themselves in your shoes.
18. They care.
19. They respect your feelings. You can relate to their interest, and have activities in common. You enjoy being around them. You can share very personal thoughts with them.
20. Someone who listens and is willing to help you out. Friendly, approachable, and easy to get to know.
21. A combination of time spent together, mutual respect, enjoyment of time together, similar values.
22. You enjoy their company, spend time together.
23. Easy to talk to. Good values, stick up for you, priaks, funny, nuts.
24. Common interests, trust, common personality traits, easy to talk to, reliable.
25. Similar overall interests, sense of humor, easy to talk to.
26. Shares common activities and interests, able to discuss anything without fear of being made fun, trust.
27. Common interests, close in age, good personality, hang out comfortably outside of golf.
28. There for me when I have a problem, talk to them about anything, not afraid to ask them for a favor.
29. Respect, trusting caring.
30. Loyalty, fun
31.

32. Thing you have in common and how you treat each other.
33. A person that I can talk to about anything. Someone, I can laugh with etc.
34. Someone that is fun to be around and around a lit(?).
35. Good communication, things in common.
36.
37. They share the same interest as you, they care what you do, and they are fun to hang out with.
38. Trust

Appendix N

HOW WOULD YOU DESRCIBE YOUR LEVEL OF GOLF TO YOUR TEAMMATES

1. Capable of shooting similar
2. I would say that everyone is on the same level as the skills go, but it just depends on the mental game of the day.
3. Very competitive
4. Nothing
5. I am in the middle of the pack
6. I would say for the most part we are all equal, except for one or two guys
7. As good or better than most
8. Middle to top of team. Alex is the worst
9. Nothing
10. Equal to top performers
11. I was very high freshman year, then I decreased
12. Very Similar
13. Teammates are better than I
14. Solid player. Needs practice to get to next level
15. I would describe my skills equal to or better than my teammates
16. My teammates and I are of the same skill level
17. Intermediate
18. Equal to or better
19. I compare equally with many of the members of the team. I am ranked 8th out of ten guys.
20. I am not as long a hitter as some of the guys of the team but I play on consistency
21. Comparable, better at times and worse at times
22. My skills are comparable to those of the best golfers on the team.
23. I feel that I am the best, or at least in the top ? (1090) of the golf team
24. On any given day, I feel I am one of the better players if I stick to my skills.
25. At least at the same level as everyone on the team, better than some.
26. Currently, I am one of the top players on the team. My golf skills compare with 3 other members of the team, clearly ahead of the rest.
27. I feel I can compete with everyone and not feel intimidated by their skills. I don't feel that anyone would claim they are better than me overall.
28. Slightly better in most categories
29. Comparable
30. Average
31. About average but could bear anyone on any given day.
32. We are all around the same (Top 5)
33. I feel that I am one of the players on the team. 3 of us are pretty even.
34. Better than some, not as good as others
35. Comparable
36.
37. I feel that I have good skills while my teammates also have good skills
38. On a similar level.